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DIESEL RAILWAY TRACTION SUPPLEMENT

The December issue of THE RAILWAY GAZETTE *Supplement, illustrating and describing developments in Diesel Railway Traction, will be ready on December* 1, *price* 1s.

GOODS FOR EXPORT

The fact that goods made of raw materials in short supply owing to war conditions are advertised in this paper should not be taken as indicating that they are available for export

NOTICE TO SUBSCRIBERS

Consequent on the paper rationing, new subscribers cannot be accepted until further notice. Any applications will be put on a waiting list and will be dealt with in rotation in replacement of subscribers who do not renew their subscriptions

POSTING "THE RAILWAY GAZETTE" OVERSEAS

We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. THE RAILWAY GAZETTE *possesses the necessary permit and facilities for such dispatch.*

We would emphasise that copies addressed to places in Great Britain should not be re-directed to places overseas

TO CALLERS AND TELEPHONERS

Until further notice our office hours are:
Mondays to Fridays 9.30 *a.m. till* 4.30 *p.m.*
The office is closed on Saturdays

ANSWERS TO ENQUIRIES

By reason of staff shortage due to enlistment, we regret that it is no longer possible for us to answer enquiries involving research, or to supply dates when articles appeared in back numbers, either by telephone or by letter

ERRORS, PAPER, AND PRINTING

Owing to shortage of staff and altered printing arrangements due to the war, and less time available for proof reading, we ask our readers' indulgence for typographical and other errors they may observe from time to time, also for poorer paper and printing compared with pre-war standards

Railway Nationalisation Again

MR. GEORGE RIDLEY, M.P., Chairman of the Labour Party, and Sir William Wood, President of the London Midland & Scottish Railway Company, recently have expressed their views on railway nationalisation in successive issues of *The Star*. Mr. Ridley claimed that for financial reasons a physically efficient, modernised railway system could be secured only if the State provided it with the money for the job, and said that this was the overwhelming case for nationalisation. Sir William Wood pointed out that the pre-war net revenues were depleted for three main reasons: the inequality between various forms of transport as to charging powers and conditions; the pre-war state of trade in areas such as the North-East Coast and the Clyde; and the fact that, despite these conditions, the railway companies had well maintained and continued to improve their tracks and equipment. In the twenty years since the four railway companies were created in 1923, they have been successful in providing the money to maintain and develop their undertakings, and for these purposes they spent no less than **£440,000,000**. Private capital, therefore, has already provided the railways with the money to secure a physically efficient and modernised system, despite the difficulties arising from the inequalities in the existing laws from which the railways suffer, and which the Government in 1939 undertook to adjust.

Control and Ownership

A recent article in *The Financial News* deals at some length with some statements by Lord Latham on the subject of capital ownership and control. Lord Latham's views on these subjects have added weight by reason of the fact that he is a Member of the London Passenger Transport Board, a well-known figure in the Labour Party, and a director of businesses run under private enterprise. In particular, *The Financial News* quotes Lord Latham as saying: "It is open to serious consideration whether the divorce of management from ownership is likely to prove satisfactory in any proper sense. It possesses the defect that those who manage do not own, and they who own have no control over the management of their assets nor the return they produce. The owners have no ready or effective address, although the general public can exact some measure of accountability through Parliament. This separation of management from ownership may become in reality a conflict between public interest and private profit, resulting in injustice to the owners and disadvantages to the public." Much the same point was made in our issue of June 18, in an article dealing with the future of transport. Lord Latham concludes that both control and ownership should be concentrated in the State, but that is not as important as his recognition of the difficulties inherent in the divorce of ownership and control.

British and American Export Policies

In his presidential address to the annual meeting of the National Union of Manufacturers, Sir Patrick Hannon, M.P., pointed out that although American planning for future trade had been going on during the year with accelerated velocity, there had been no indication of a clear-cut policy on the part of Great Britain. The competitive power of the United States, if exercised without recognition of mutual obligation between that country and the British Commonwealth, would present a formidable prospect. On the other hand, with commonsense, understanding, and a spirit of goodwill, there was no reason why the anxiety now entertained by British manufacturers should not be converted into a mutually helpful co-operation. There can be no doubt that Sir Patrick Hannon touched upon one of the matters that is causing a great deal of concern in British industrial circles at the present time, and among those not the least affected by the implications of his speech are the great numbers of trades wholly or partly engaged in supplying the needs of railways in all parts of the world. Mr. Ralph Assheton, Financial Secretary to the Treasury, who addressed the same meeting, emphasised that it would be vital to our standard of life to make good the loss of our overseas investments and other income by expanding our export trade, and he also urged the necessity for a continuation of the spirit of co-operation developed during the war among the United Nations, and expressed the hope that it might lead to the removal of many of those difficulties in the monetary and commercial spheres which so handicapped trade in the years between the wars.

Productive Capacity in Former Markets

There can be no doubt that one of the major difficulties which will have to be surmounted after the war by the suppliers of railway and other capital goods will be the marked development

of productive capacity for equipment of this kind in markets which were formerly dependent for their needs on the older industrial nations. Under the stress of wartime manufacturing needs, many countries have established or developed considerable manufacturing plants which will be capable of relatively easy conversion to peacetime use. This is known to have occurred in many parts of the Empire. An example of the current trend is to be seen also in a report received by the Bank of London & South America to the effect that a company which is being formed in Brazil is negotiating with British and American concerns for the manufacture under royalty of vacuum brakes and couplers. The reports so far to hand are vague, but they also speak of another company which, in conjunction with the first, will be able to handle between 200 and 300 railway vehicles a month.

Argentine Railway Inquiry Committee

It is announced from Buenos Aires that the Argentine Government has appointed a committee of three to study the difficulties of the British-owned Argentine railways, and to discuss them with the railway directors now visiting Argentina. The committee will consist of the Director-General of the Railway Department of the Ministry of Public Works, Señor Arturo Noni, the General Manager of the Argentine State Railways, Señor Eduardo Huergo, and the Under-Secretary of the Ministry of Finance, Dr. Juan Carlos Sola. The conclusions and recommendations of the committee are to be submitted to the Argentine Government, and the Decree appointing the committee emphasises the need of a solution which will take into account the national interest as well as that of all foreign-owned railways. The appointment of this committee, so far as is known, is the first move which has been made by the Argentine Government as a result of the visit of Mr. J. M. Eddy, Mr. Harold Drayton, and Lord Forres to that country.

Overseas Railway Traffics

Some strength has been shown in the prices of British-owned railways in Argentina in consequence of the appointment by the Argentine Government of a committee to inquire into their circumstances. On the whole, the traffics for the 19th and 20th weeks of the financial year have tended to improve. Increases of receipts for the two weeks have been:—£38,472 on the Central Argentine, £37,440 on the Buenos Ayres Great Southern, £24,000 on the Buenos Ayres & Pacific, and £1,440 net on the Buenos Ayres Western. Brazilian railway returns, fortified by tariff increases, have been showing substantial rises for some time, and for the period from January 1 to November 13 the aggregate receipts of the Great Western have amounted to £743,900, an increase of £234,500, and those of the Leopoldina to £1,595,583, an advance of £208,639. The San Paulo in the 45 weeks to November 7 has earned £1,963,558, an improvement of £299,428. Below is given our usual table showing traffics for some of the principal overseas railways:—

	No. of week	Weekly traffics £	Inc. or decrease £	Aggregate traffic £	Inc. or decrease £
Buenos Ayres & Pacific*	20th	104,400	+ 9,900	1,791,900	+ 76,260
Buenos Ayres Great Southern*	20th	175,620	+ 23,040	2,951,340	+ 259,320
Buenos Ayres Western* ...	20th	55,980	— 1,980	987,000	— 12,840
Central Argentine*	20th	154,575	+ 28,167	2,636,019	+ 206,100
Canadian Pacific	46th	1,224,200	+214,000	50,914,800	+6,936,800

* Pesos converted at 16⅔ to £

Good and steady gains are being made by the Central Uruguay Railway, which for the 20 weeks of the financial year records traffics £186,205 higher, at £614,493. Antofagasta gross earnings have been well on the right side for some weeks past, and the aggregate for the 46 weeks to November 14 is £1,302,400, marking an advance of £323,950.

Venezuelan Railway Nationalisation

It is reported from Caracas that the *Public Gazette* of November 16 contained a decision of the President of the Republic that, "for reasons of public interest," the nation shall take over all the properties, rights, and interests of the Gran Ferrocarril de Venezuela. Experts are to determine the appropriate compensation. This undertaking, which comprises 112 route miles of 3-ft. 6-in. gauge, is the only railway in the country built to link inland centres with one another, all the others feed a port. It extends from Caracas to Valencia, and was constructed by a German company in 1894. Ownership was transferred in 1924 to a Spanish company, the Cia. de FFcc. Sudamericanos of Madrid, but German interests are said to predominate still. Heretofore, there has been no policy of railway nationalisation in Venezuela, where road development has been the more immediate care of the State, but the Government already owns a total of 156 route miles (in 5 short sections) of the 634 miles in the country, including the important El Palito to Palmasola link opened last year. The railways of Venezuela formed the subject of an article (with map) in our October 8 issue, page 357.

Civil Servants' Health

As from the beginning of this month Sir Henry Bashford has been released from his post as Chief Medical Officer to the Post Office to supervise a regular medical service which is to be made available for the whole of the Civil Service. The Post Office has had a medical service since 1855; it ranks as the largest industrial medical service in this country, and possibly in the world. When Sir Henry Bashford first went to the Post Office the established staff numbered about 75,000 men and 12,000 women. The respective figures at the present time are 140,000 and 43,000. Temporary workers bring the number of persons to nearly 300,000. The last peacetime figures showed that 56 per cent. of the men and 22 per cent. of the women were over 40, which showed an increase of 10 per cent. in each case over the figures for 1923. The average age of those retiring because of ill-health has increased by 6 or 7 years as compared with 1907. Sir Henry Bashford points out that this means that the workers' years of working capacity have increased, and, in spite of the higher average age, the health of the staff has been extremely well maintained. In 1938 the sick rate for the men was the lowest for 25 years, and that for women the lowest for 40 years.

Tourist Facilities in Eire

Development of tourist facilities in Eire was discussed in a hopeful spirit at the annual luncheon in Dublin of the Irish Tourist Association, which is working in full co-operation with the Irish Tourist Board of the Government. Mr. Sean Lemass, the Minister for Industry & Commerce, said that the Tourist Act of 1939—hitherto not implemented because of the war—would be put into operation in so far as emergency conditions permitted. Plans for three schemes for the development of tourist resorts, namely at Tramore, Portmarnock, and Lisdoonvarna, had been approved, and the Tramore scheme already had been begun. A square deal to visitors was, he said, to be guaranteed by a partial scheme of registration; by insisting on fixed published prices and universal cleanliness; and by preventing overcrowding and misrepresentation. Regulations in the Tourist Traffic Act cover hotels, guest houses, holiday and youth hostels, and holiday camps. There will be an annual registration fee, not exceeding £2, and premises may not be described as a hotel unless registered in the register of hotels, and the proprietor as a hotel proprietor. All premises will be liable to official inspection. From *The Irish Times* report of and comment on the proceedings it is clear that advantage had been taken by some hotel keepers during the past summer of an unprecedented irruption of visitors from Northern Ireland and Great Britain to raise charges out of all proportion to the services offered.

More Steel for American Railways

Urgent representations by the Office of Defense Transportation of the United States to the War Production Board have resulted (as recorded in our October 29 issue) in the latter allowing a larger quota of steel for railway use during the last, than in the preceding quarters of the year. From October to December inclusive the railways are to receive 400,000 tons of rails, which will bring to a total of 1,520,000 tons in 1943, as compared with 1,300,000 tons in 1942, the rails allowed to be supplied for normal replacement purposes. With the fourth quarter's rails go 240,000 tons of track accessories and 300,000 tons of other maintenance materials. The wagon position also will benefit. The W.P.B. has authorised the building of 9,570 bogie freight-wagons in the last quarter of 1943, as compared with 5,801 in the third quarter, raising the year's allocation of new wagons to 35,371. The steel position is being eased by the use of timber in wagon construction, for example, in the new hopper wagons described on page 533, in which 2½ tons of steel are being saved in this way in each of 4,000 wagons. This is advantageous in reducing wagon tare, but disadvantageous, of course, in wagon maintenance.

Grouping of Canals Advocated

Merging of inland waterways in England was recommended by Mr. W. Fraser, Secretary & Traffic Manager of the Trent Navigation Company, in his address on "Inland Waterway Transportation" given recently to the Hull & District Centre of the Institute of Transport. Taking as a precedent the grouping of the railways under the Act of 1921, he advocated the amalgamation of certain waterways and the absorption of others which

could result in the formation of one or more great inland waterway corporations created by special Act of Parliament, but independent of State control. He wished to do away with the railway ownership of canals, and in support of this view he stated that the result of the operation of the railway-owned canals showed a net loss in 1938 of £61,000 on a capital expenditure of £8,000,000, whereas the average rate of return in recent years on the capital expenditure of the independent undertakings had been 2 per cent., including revenue derived from ancillary sources. In this connection it may be recalled that railways are mostly unwilling owners of canals, the purchase of which was forced on them by Parliament. On the Continent canal development has been favoured by level country which does not exist in many parts of England. There are fine English waterways on which public money could be spent with advantage, but it may well be doubted whether wholesale expenditure on railway-owned canals would add to transport efficiency.

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New Ten-Coupled Spanish Locomotive

Local conditions often have considerable effect on the design of locomotives so that they acquire regional characteristics somewhat in the same way as occurs with the human inhabitants. In Spain there are two factors that have an important influence on locomotive development; the first is the relatively broad gauge of 5 ft. 5½ in., and the second is the mountainous nature of the territory which necessitates long steep gradients and frequent sharp curves. Due to the last-mentioned factor even the express passenger engines require to be built with relatively small driving wheels and with as great a proportion of adhesion weight as possible. In general, high-speed running is out of the question and not provided for in Spanish locomotive design. The conjunction of small wheels with a wide gauge is favourable to the employment of large boilers having wide fireboxes; consequently many Spanish locomotives are of great steaming capacity and power. On p. 537 is described a new 2-10-2 design which reflects very clearly the influence of the foregoing local factors. Nowhere else in Europe would such a remarkable machine be needed and nowhere else could it be operated.

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Tunnel Bottlenecks

The existence on any railway route of a tunnel or tunnels of restrictive dimensions may constitute a serious bottleneck in the operative realm. Over certain British lines, for this reason, stock narrower in width than the normal standard only may be used; and restricted clearances in general have had a considerable influence on the design of such all-purpose classes as the L.M.S.R. class "5" 4-6-0s, so that these engines may have the widest possible radius of action. In the United States, in present conditions, considerable attention is being paid to this problem, as it is realised that certain tunnels of too cramped a cross-section to take the larger motive power units are impeding the flow of wartime traffic. Some of these structures can be dealt with by lowering the floors to obtain increased vertical clearance, or by "gouging" the side-walls for greater width, but in others, more extreme measures are necessary. One is to open out the tunnel, but this is not considered an economical proposition if the cutting to be made exceeds 100 ft. in depth. The difficulty can at times be got over more cheaply by carrying a new line round the tunnel on a location on which less cutting will be required. The only alternatives are to enlarge the entire tunnel structure or to drive a new tunnel. In any event, a vital consideration is to carry out the work with minimum interference to traffic, and this is the chief argument against enlarging a tunnel section. The open cutting, where possible, is generally the most desirable alternative, and has the additional advantage of reducing maintenance costs when it is complete.

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Locomotive Endurance and Performance

Details have recently reached this country of some remarkable mileages run by some British locomotives supplied early in 1940 to the Rhodesia Railways. The engines concerned are four 4-6-4 + 4-6-4 Beyer-Garratts, of which details were given in our August 9, 1940, issue. Monthly mileages are given from placing in service to the first general repair, thus affording a complete picture of the work done. The figures show that the four engines have run a period of three years each; the only stoppage was for two to three weeks for tyre turning, at an average of 116,922 miles. The average mileage to general repairs was 215,284; one engine actually ran 229,819 miles. The total mileage worked during three years was 861,135. The average monthly mileage therefore per locomotive over the three year period, including stoppage for tyre turning, washouts, and running repairs, was over 6,000. The above mileages were run on a 170 mile section, with a ruling gradient of 1 in 80 compensated and 660 ft. curves. The average speed of passenger trains is, we understand, about 30 m.p.h. and of goods trains 20 m.p.h. The average speed of train movement for the whole system is 17 train-miles per train-hour. The increased load hauled by the articulated engine, coupled with this fine example of operating, undoubtedly accounts for the high gross ton-miles per train-hour figure of this railway, which was 10,735 for last year. This, it will be appreciated, has been reached on a 3 ft. 6 in. gauge single line railway, on which the maximum axleload of locomotives and rolling stock is 13½ tons. These results reflect great credit on the railway concerned and also on the British locomotive industry.

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A National Transport Trust ?

ON another page we publish a summary of a paper on post-war transport which was read by Mr. Bertram Darell Richards before the Institution of Civil Engineers. In his opening remarks the author stated that transport is so intimately connected with engineering both in its constructional and national aspects that the views of the profession are essential to the consideration of the subject. There can be no denying that the engineer plays a large part in transport, but in view of the many other interests involved in a paper of the kind read by Mr. Richards it would seem to our mind that it was more suitable for presentation before the Institute of Transport. The basis of his scheme is the formation of a National Transport Trust, but there is nothing fresh in this idea and we shall have some remarks to make later about the constitution proposed for that body.

Some time ago Lord Reith spoke about setting up a national transport corporation and we have also heard suggestions from other sources that the existing Transport Advisory Council, although it has produced several valuable and judicious reports, should be replaced by a smaller commission which would be in permanent session and exercise executive powers such as the Board of Admiralty possesses. These schemes are on much the same lines as Mr. Richards's proposal to establish a Central Board of Control and they are all rather sketchy. The authors fail to define the precise position of the Minister of Transport in the suggested post-war regime and do not explain in sufficient detail how the commission or board is to go to work or what the scope of its authority is to be. We doubt whether these planners appreciate the magnitude of the responsibilities which they discuss so freely; in particular they appear to assume that the railways—our one thoroughly organised form of transport—can be treated cavalierly without troubling to consult their rightful owners.

Three-quarters of Mr. Richards's address are devoted to a general review of the transport system. In this he says that railways are best adapted to long-distance passenger traffic and to heavy goods traffic for long distances at medium speeds. The first statement ignores the fact that the railway is still supreme for the mass movement of passengers over short distances. The crowds of suburban travellers using Waterloo, Liverpool Street, and other London stations could not be carried by road. Neither, in the opinion of experts, could the workpeople for whom the railways are now running 1,000 special trains to factories every day. The second statement is equally wide of the mark. A large proportion of heavy goods traffic moves for short distances only; coal and coke forwarded for shipment or to blast furnaces, iron and steel passing to shipyards, and sugar beet going to factories, to quote three examples, yield short hauls as a rule.

On one line, at least, figures which were supplied for the Ministry of Transport in 1936 indicated that 88 per cent. of shipment coal and 60 per cent. of inland coal was conveyed for distances not exceeding 25 miles. Further, the Transport Advisory Council was informed in 1939 by the British Iron & Steel Federation that not more than 3 per cent. of iron and steel traffic is capable of transference to road transport and the Mining Association of Great Britain stated that the coal export trade is absolutely tied to the railways and 95 per cent. of the inland trade is also tied. On the other hand, express freight train services, overlooked by Mr. Richards, are designed to carry high-class goods such as meat, fruit, and perishable traffic generally between distant places at high speeds. Some of the braked freight trains travel as fast as intermediate passenger expresses and their number was growing before the outbreak of war.

We are next told that "the present railways have a potential carrying capacity far in excess of the demand." This is not true of any reasonably good year like 1929 and 1937 and even in lean years there is always a need for some facilities which are not available. In any year an improvement in traffic of ten per cent. over the previous twelve months is sufficient to strain railway resources severely. In wartime a rise of 50 per cent. in both passenger and freight carryings over the period

before Government control is described by Mr. P. Noel-Baker as "disturbing" in spite of the construction of many new works at the expense of the State to meet the emergency.

Mr. Richards thinks that competition has led to wasteful duplication of railway services. He does not give a single example and we doubt whether before the war there were any superfluous train services. When there are two routes between important towns, the services cater for separate sections of the public at intermediate stations. The companies in their own interests have naturally reviewed the train arrangements in competitive areas with the object of curtailing mileage, but we have not heard that they were able to make any sweeping changes.

He admits that road motor competition is one of the main causes of the railways' difficult position, largely due to the ability of operators to pick and choose their traffic and fix their prices on the basis of cost. It should be pointed out, therefore, that the railway classification of goods was settled originally by a Government Committee on the basis that it was in the national interest that traffic in the basic industries most affected by transport charges should bear a relatively lower proportion of railway overhead expenses than other traffics. The advent of unregulated road competition gradually undermined the whole basis on which Parliament required railway charges to be fixed. This unfair and discriminatory treatment by Parliament of two sections of the same industry gave rise to the conflict between road and rail interests and this problem must be solved before any wider post-war scheme can be solved. Given freedom to make reasonable charges, the railway companies would be able to reduce their charges on the higher class traffics and correlate them with those of road hauliers. If this were done, however, it would be necessary to increase charges on the basic industries' traffics which could not readily be diverted to road.

Coming to the structure of the Transport Trust, there can be no justification for including railways and motor road passenger services, while motor road goods transport is left to be independently owned and operated. Nor is there any reference to the "C" licence holder. The burning question of the hour is the establishment of satisfactory relations between road freight haulage and the older forms of transport, railways and coastwise shipping. The author's proposal that road goods services should be subject to a measure of regulation as regards conditions of working and rate tariffs affords no solution of the road-rail problem as it leaves untouched the root cause of the dissimilar charging systems. Failure to co-ordinate these systems will effectively prevent any rationalisation scheme. On Mr. Richards's own showing, road haulage is far less organised than road passenger conveyance. There, if anywhere, surely lies the opportunity for the Trust and the Board of Control to bring order and system into an industry that was unfortunately allowed to grow up without adequate regulation in the years after the last war. The proposals fail to deal with the major problem of the relationship between road and rail. The postulated control by the licensing authority which would regulate the quantity and size of the vehicles using the highways might keep heavier vehicles off the road, but the point is, of course, that it is the lighter vehicles that are taking the higher-grade traffic from the railways.

The proposal that, under the Trust, a Coastal Shipping Port Board should control coastal shipping facilities at railway ports seems both uncalled for and unworkable. The dockowners alone possess a full knowledge of the requirements at each port and are thus able to manage the quay working to the best advantage. As a last point the Trust would have to be in constant touch with the London Passenger Transport Board, which is linked with the main-line railways through the standing joint committee and the pool of receipts on suburban traffic. The tendency before the war was for the board to take over the working of electrified services on suburban branches and join them with the "tubes." This practice will be resumed when peace comes and many other questions affecting the main lines will arise such as the restoration of the Green Line buses which ran for distances of as much as 30 miles from the centre of London.

Our final criticism of the paper is that Mr. Richards discusses finance in one short paragraph. We do not follow how capital could be raised by the issue of stock or bonds at fixed rates of interest and then be devoted to the construction of classified roads. The net profits of the trust, after it has taken over five sources of revenue, are to go into a general pool, which is to bear interest, expenditure on extensions, and a contribution to a reserve fund. Mr. Richards evidently considers that there may be an excess to go to the reduction of rates and tariffs. We doubt whether any of our readers will share his optimism. We appreciate that Mr. Richards has given a great deal of time to the writing of his paper, but we cannot help feeling that he is out of his depth at times, especialy when he comes to deal with financial arrangements.

Transport Problems in 1944

THERE can be no doubt that the fifth winter of the war on which we are now embarking will see the heaviest demands yet made on transport of all kinds. It is probable, indeed, that from now until the end of the war the use of transport will be such as to eclipse the many previous records that have been established during the present conflict. In attempting to forecast the demand which will be made during the coming winter and the ensuing year it is necessary to take into account not only a continuance of the steady rise in traffic already in being, but also the possibility of major disturbances resulting from military operations. Apart from special requirements, such as the impending invasion of the continent, which will undoubtedly make heavy and exacting demands on both shipping and inland transport at every stage of its preparation and execution, the pressure on the available resources in this country is already rising. American military personnel is arriving in this country and requiring the running of hundreds of additional trains; larger convoys are berthing at our ports, and they are an added load on inland transport; wagons and canal vessels are needed in increasing numbers for the disposal of open-cast coal. These are but a few of the factors which make for the most intensive working of the transport system.

To cope with these increased demands and to assist in the impending offensive, the Ministry of War Transport is now considering its plans. The chief bottleneck in the transport system as a whole has been shipping, and it remains so although there has been some improvement in this connection. As that bottleneck is widened, the load on inland transport is increased. Part of this load is being carried by coastal shipping, which is now moving a weight of traffic as high as at any time since the beginning of the war. The canals have recently completed their first year under Government control, during which time traffic has increased by 140,000 tons to 11¼ million tons. Measured in ton-miles, the increase is much greater, for there has been a very healthy tendency towards longer hauls on inland waterways and a reduction on empty mileage. Nevertheless, it has to be borne in mind that the weight of additional traffic which can be put on the inland waterways is severely limited.

Road haulage has been planned to meet the situation which is now developing by concentrating traffic in fewer vehicles, and by switching traffic from road to rail it was possible during the summer months to stand by on an average about 1,600 long-distance vehicles a day. The Ministry already has had to bring into action a substantial number of the vehicles standing by and the hiring of vehicles by the Ministry is still proceeding. It is expected that the total number of long-distance lorries within the Ministry's organisation will be brought up to about 14,000, exclusive of some 5,500 vehicles in short-distance traffic, and a further 1,600 in the meat section. It is hoped that there will soon be available a fleet of about 20,000 vehicles fully manned or able to be manned at short notice. Road passenger services are carrying more passengers per vehicle than in peacetime, and the main limiting factor is not fuel, nor rubber, nor vehicles, but crews.

The railways, with depleted staffs, are now carrying half as much traffic again as they did before the war. Every day they run 1,000 extra trains for workers; every week they run something like 1,500 special trains for troops and their stores. The locomotive position is easier, thanks to the arrival of United States engines and deliveries of "austerity" locomotives. There are 400 of the former and 280 of the latter in traffic. Repair of railway wagons and the building of new ones is being speeded. Construction can afford only limited relief, which, in any case, cannot be felt for some time. For immediate relief the Ministry is relying mainly upon an acceleration of repairs and on the new drive to turn round wagons more quickly. After reducing all traffic to bare essentials and a severe measure of rationalisation, inland transport—rail, road, canal, and coastal shipping—is moving, on the average, 1¾ million tons of traffic every day.

In the expectation that there will be further withdrawals of coastal shipping for military purposes, every effort is being made to increase carrying capacity by construction, by speeding the turn-round of vessels and vehicles, and by a further pruning of non-essential traffic. The whole of the military plans made in Quebec hinge on transport, and transport is being braced to meet that strain. Although Government traffic can be controlled, the Ministry of War Transport cannot control, except within broad limits, the rising tide of passenger traffic. Numbers of trains and bus services can be fixed. Troops, workers, and urgent freight come first. Within those limitations the question of travel must be left to the public. In the first half of this year 56,000,000 more passenger journeys were made than in the same period of last year—an increase of about 10 per cent. Most of this increased travel is within the war effort, but much of it is

concerned only with pleasure. Men and women have been working at high pressure for four years and more without a break. Not only do they deserve a break, but, if it were possible, it would help production. At the present juncture, however, sight should not be lost of the fact that every non-essential journey has its effect in postponing the time when holidays may once more become a natural concomitant of the working year. That time is not yet.

The Peruvian Corporation

THE Peruvian Corporation owns and operates eight railways—seven in Peru and one in Bolivia—as well as steamers on Lake Titicaca, and the annual report and accounts for the financial year ended June 30, 1943, has been issued recently. The financial results of working the railways present a mixed showing. The principal line—the Central of Peru—did well, the net receipts increased from £72,043 to £136,005. On the other hand, the Southern Railway of Peru, the next most important line, judged by earning capacity, was unable to maintain its net receipts at the previous year's level, and the net earnings fell from £97,077 to £88,716. Of the remaining six railways, four were worked at a profit, some lower and others higher, and two showed larger losses than in the preceding year. The Lake Titicaca steamers, though profitable, earned net revenue which was little more than half the corresponding amount—£9,764 against £18,190. Taking the corporation as a whole, the total net receipts amounted to £229,458, against £187,052, an increase of £42,406. The following statement reproduces the differences in net receipts of the several undertakings, compared with the previous year:—

	Net receipts	
	Increase	Decrease
Railways—	£	£
Central of Peru	63,962	
Southern of Peru		8,361
Guaqui—La Paz (Bolivia)	(Loss) 6,627	
Trujillo (Peru)		570
Paita to Piura (Peru)	3,401	
Pacasmayo (Peru)	496	
Chimbote (Peru)	(Loss) 2,034	
Pisco to Yca (Peru)	565	
Lake Steamers		8,426
Net increase	£42,406	

The Chairman's statement, issued with the report and accounts, intimates that trade in Peru continued to prosper, hampered only by lack of shipping. The gross receipts, in Peruvian currency, were a record, but the exchange rate, perhaps unduly low in view of the prosperous state of the country, rendered the benefit to the corporation proportionately slight. Meanwhile, prosperity coupled with the high cost in depreciated currency of imported foods and other necessities, increased the cost of living, particularly in its incidence on lower paid labour, and wages had to be increased accordingly. On the other hand, receipts were favourably affected by higher rates and charges and by the transport of over half a million more passengers, chiefly due to the curtailment of competing road-motor services. The constant rise in the price of materials is a serious matter and the difficulties of obtaining supplies of new equipment, rails, etc., are getting worse as the war goes on, necessitating the retention in service of obsolete stock with consequent detriment to the level of maintenance expenses. Important mining developments are taking place in the zone of the Central of Peru, but, unfortunately, the railways has had to refuse traffic because of inadequacy of rolling-stock to deal with it.

On the passenger side, the restriction of road-motor services has diverted traffic to the railways and the corporation has installed diesel engines to enable self-propelled passenger units to be put into service. More stock of the same type would have been in operation had it been possible to obtain supplies. It is hoped to retain much of the increased passenger traffic by providing fast, comfortable travel of this type at the earliest possible moment, against the day when road competition is restarted. The diminution in net receipts on the Southern group of railways and the lake steamers arises from the fact that exceptional international traffics were carried in the preceding year, because of large purchases by Bolivia from Peru, which were not repeated in the year under review, added to which much international traffic which formerly went through the port of Mollendo has been diverted through Chile.

Although the present level of traffic will probably be maintained there is little prospect of improvement until normal working at the port of Mollendo is resumed. In commenting on the results of the Northern Railways, which do not show much change, when taken together, the report mentions that self-propelled units which are an important feature of the equipment of these railways, have been worked to capacity and that the need for more of these popular vehicles is very acute. The report suggests a feeling of confidence that the diesel railcar had done a good deal towards solving the problem of successfully countering road motor competition, though the Peruvian railways, like so many other South American lines, are handicapped through difficulty in obtaining much-needed supplies of new stock from overseas.

The gross traffic returns in the current year to date show a substantial increase and there is reason to believe that, allowing for the ever increasing costs of operation, the final results should at least equal those of the past year.

The Bengal & Assam Railway

FOR some years past the Government of India has consistently exercised its option to acquire company-owned or company-operated railways at the due dates, and, in two important instances since the outbreak of war, this has resulted in the establishment of new systems bearing titles previously unfamiliar, namely, the Bengal & Assam Railway and the Oudh & Tirhut State Railway. By reason of the changes having taken place in wartime, they have received less attention in the press than would otherwise have been the case, and the delays in communications between India and this country are such that it has not yet proved practicable to include completely revised details in the "Universal Directory of Railway Officials & Railway Year Book" in respect of either of the new systems. Now, however, through the courtesy of Mr. L. P. Misra, General Manager of the Bengal & Assam Railway (and formerly General Manager of the Eastern Bengal State Railway), we have received some particulars about that system. The parent system, namely, the Eastern Bengal Railway, was acquired by the State from a company in 1884, and it and the subsequent extensions have been worked by the Government ever since. The Bengal Dooars Railway Company, which was formed in England in 1891, was taken over by the State on January 1, 1941, and has been amalgamated with the Eastern Bengal system. The Assam-Bengal Railway Company was formed in England in 1892, and took over works begun by the Government in the previous year. Its system gradually extended until it had the monopoly of the whole area east of the Brahmaputra River, with the exception of the Dacca and Mymensingh districts served by the Eastern Bengal Railway. On January 1, 1942, the Assam-Bengal Railway was acquired by the State and was combined with the Eastern Bengal Railway to form the Bengal & Assam Railway. From April 1, 1942, the B. & A. took over for operational control for the period of the war the Dibru-Sadiya Railway belonging to the Assam Railways & Trading Company, a matter to which we made reference in our May 28, 1943, issue, on page 543.

The Bengal & Assam Railway serves nearly the whole of the province of Bengal, a small portion of Bihar, and the whole of Assam. This area includes the larger part of the Gangetic delta and the lower course of the Brahmaputra. The B. & A. Railway system has connections with the East India Railway system *via* the Willingdon Bridge (near Dum Dum Junction) and the Jubilee Bridge (near Naihati) both over the River Hooghly. For administrative convenience, the portion west of the Brahmaputra is referred to as the E.B. Zone and that to the east as the A.B. Zone, retaining the nomenclature which was in use before the amalgamation. A feature of the system is the number of great river crossings mostly by wagon ferries, but the lower Ganges is bridged (Hardinge Bridge) to carry the main line from Calcutta to Siliguri (for Darjeeling). Another noteworthy feature is the Hill Section of the A.B. Zone which has entailed very heavy construction work, expense, and gradients. There is very heavy suburban traffic on the lines in and around Calcutta. The bulk of the Indian export coal crosses the Hooghly and passes over this system and thence to Kidderpore Docks (Calcutta). Apart from this, jute and rice are the principal goods carried. There is a heavy passenger traffic to Darjeeling, the hill station nearest to Calcutta. The A.B. Section serves the tea-planting districts, linking them with Chittagong Port.

The whole system comprises 3,478 miles, of which 898 miles are of the Indian broad gauge of 5 ft. 6 in.; 2,543 are of metre gauge; and 37 miles of 2 ft. 6 in. gauge. In addition, there are 9 miles of metre-gauge line under construction. The broad-gauge rolling stock consists of 293 locomotives, 1,140 carriages, 8,729 wagons, and 6 motor cars and vans; the metre-gauge rolling stock of 412 locomotives, 2,117 carriages, 10,333 wagons, 1 steam-propelled railcar, 4 motor cars and vans; and the narrow-gauge stock of 9 locomotives, 55 carriages, and 27 wagons.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Post-War Transport in Great Britain

To the Editor of The Railway Gazette

Sir,—In his preface to his paper on "Post-War Transport in Great Britain," read before the Institution of Civil Engineers on November 23, Mr. B. D. Richards claims that transport is so intimately connected with engineering both in its constructional and operational aspects that the views of the engineering profession are essential to consideration of the post-war planning of transport.

This claim is somewhat novel, to say the least, as we have not previously heard of shipbuilders suggesting that their views are essential to consideration of the post-war organisation of the shipping industry, or of builders claiming to be consulted on the question of the post-war co-ordination of any factories they build. Moreover, his view was clearly not shared by the Ministry of Transport, as the Transport Advisory Council, appointed by the Minister to give him advice as to the steps which should be taken to promote the co-ordination, improvement and development of transport generally, covered a large number of interests but did not include any engineering representative.

Yours faithfully,

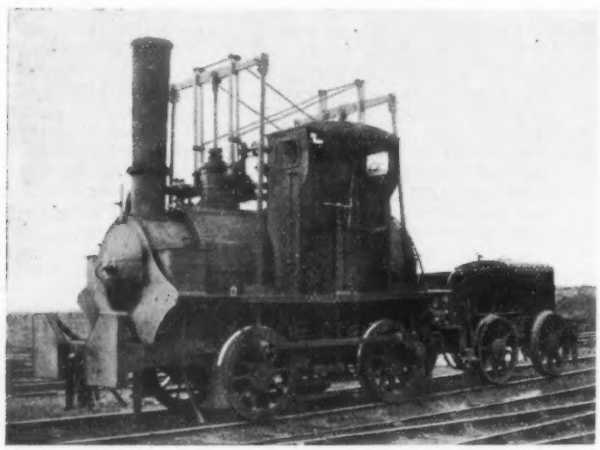
TRANSPORT MAN

Enginemen's Comfort

London & North Eastern Railway,
Stratford, London, E.15. November 16

To the Editor of The Railway Gazette

Sir,—Referring to Mr. Dow's letter in your October 22 issue, anent cab seats, it is necessary for him to look back at least



120 years, as the enclosed photograph shows a seat in the cab of the old Hetton engine. Having ridden on the engine I can state a seat was very necessary to enable the driver to remain on the iron horse.

Yours faithfully,

B. P. FLETCHER,
District Engineer (Southern Area)

[Our correspondent's photograph does not, of course, provide evidence of the antiquity of the cab or seat.—Ed. *R.G.*]

Beyer-Garratt Locomotives for Africa

"Pentrelew," Escombe,
Natal, South Africa. October 1

To the Editor of The Railway Gazette

Sir,—The new War Department Beyer-Garratt locomotive for the 3 ft. 6 in. gauge lines in Africa, details of which are given in your June 11 issue, is very interesting. It seems to have plenty of haulage power, but embodies two features which the C.M.Es of Crown Colony railways have been steadily abolishing in their new engines since the last war. These are:—

(i) The use of very small driving wheels. By reason of their high revolutions per minute and per mile such wheels reflect in heavy wear to the motion. They also preclude a longer cylinder stroke than 24 in., thereby losing tractive leverage and limiting the expansion of steam. 4 ft. is considered today as the very lowest driving-wheel diameter and 4 ft. 3 in. to 4 ft. 9 in. is more usual. It has to be borne in mind that tyre wear still further reduces small wheel diameters. A 4 ft. wheel allows a 26 in. stroke.

(ii) Most Crown Colony railways abound in sharp curves and in reverse curvatures. The pony truck is not satisfactory and leads to heavy wear on the leading driving wheel tyres. All recent locomotives have a leading bogie on Crown Colony railways.

I note that one of your correspondents is puzzled by the apparently contradictory remarks made by Mr. J. G. Robinson and myself anent the chimney of the new Nigerian Railway Garratts. What happened was that Beyer Peacock & Co. Ltd. fitted a "stock" chimney to the first engine for its steaming trials in its yard. I visited the works at that date and commented to the late Mr. Jackson on the unsuitability of the small stock fitting, when he designed one specially for the class and this was fitted to them all. I think Mr. Robinson must also have spotted the temporary fitting.

Yours faithfully,

G. V. O. BULKELEY

[We are not acquainted with the governing factors underlying the War Department's decision to order this particular type of locomotive and our correspondent will appreciate that in any event this could not be divulged for security reasons. However, it is obvious from the description of these engines we were able to give that they have been designed for a very wide field of application, which we believe includes operation on 1 in 30 uncompensated grades. The four-wheel truck does not appear to us justified in this case, particularly under war conditions, and we might add that there are examples of Garratts with this wheel arrangement in operation, which have given satisfactory service without undue flange wear.—Ed. *R.G.*]

The Scope and Interpretation of General Railway Statistics

25, Green Lane, Northwood,
Middlesex. November 13

To the Editor of The Railway Gazette

Sir,—It is difficult for me to express adequately the cordiality with which I approve your homiletic article on the subject of statistics. Not nearly enough attention is paid to official railway statistics, and still less to their proper interpretation. I have done my utmost for years to point out the lessons they teach, as you know, and I am particularly glad to note that you are directing attention to this important subject.

Except for one notable instance some years ago, I have never personally come across any cases in which it has been assumed or even implied that if the "freight-train mile per engine-hour" figure over a period were, say, 10, every freight train crawled along at a low speed. If there have been such cases, there is really no excuse for them, since I have more than once pointed out that the 1938 figure of 9·15 freight train miles per train engine-hour was an *average* figure, embracing well-loaded trains at 40 m.p.h. and upwards at the one end of the scale and very poorly loaded trains at walking speeds at the other. I have before me a list of 160 freight trains, taken at random, and it contains 60 trains (or 37½ per cent.) with overall *booked* speeds of less than 9 m.p.h.

Curiously enough, the one instance mentioned above as notable had a direct link with Mr. Mossop. It occurs in an address at York by Mr. Robert Bell, who was, I believe, closely associated with Mr. Mossop, and was reported in *The Times* of October 19, 1927, as follows:—

> ". . . the average movement of wagons on the English railways was only 10½ miles a day and their wheels were only turning for 1½ hours out of every 24. Though the average wagon had a capacity of 10¾ tons, its average load was only 5½ tons and the average speed of the freight train was only 8¼ m.p.h."

Then follows a comment which, if it had come from me, would have brought the whole universe down about my head:—

> "Such statistics," says Mr. Robert Bell, "disclosed a *painfully slow movement* of freight traffic and the prosperity of British railways depended largely on their ability to improve this side of their service." (Italics are mine).

I have no doubt Mr. Bell had in mind Mr. Mossop's explanations of "elementary points about the interpretation of his tables." Indeed, for a brief moment I thought Mr. Robert Bell might have been responsible for your article, but on reading his paper again, I dismissed the idea as highly improbable. It would be funny, however, would it not, if my first guess was right? For that paper was historic to me. I was on the Great Western Railway at the time, and after 14 years had had a second spell in the Goods Train Running Department. I knew, but dare not breathe in public, what Mr. Bell had dared to tell, and I made up my mind there and then to find out why results were so poor,

and whether they need be. I had certain theories which I had derived from seven years' varied traffic experience outside the railway service, whose importance lay in the fact that whereas on the railway I had been concerned with trains and wagons, I was for those seven years concerned with the actual traffic they carried. Further, I had amongst other things managed a large fleet of motor vehicles for the conveyance mainly of aircraft and aircraft parts and accessories of all kinds which involved the problem of bulk in relation to weight, of which my critics have made so much.

When, therefore, in 1928 I had the opportunity of making an intensive study of branch-line working, I gained the intimate practical experience needed to check my theories—to "secure my impressions . . . by practical tests" (I paraphrase you somewhat)—and fourteen more years outside the railway service have given me even wider opportunities of doing so, here and in many countries on the continent and abroad. There is, therefore, no justification for the suggestion in your last paragraph that I have not proceeded on the "same sound principle." (That suggestion, by the way, is not really consistent with your earlier remark that you were "quite willing to suspend judgment on the fundamental idea until . . .")

I consider the "net ton miles per engine-hour" figure (for my immediate purposes *train*-engine hour) as the main test of operating efficiency, and in suggesting 15,000 net ton-miles per train-engine hour as an easily attainable *average* figure, I have taken, after a careful study of the authorities on the subject, and of practical results, an average of 500 pay-load tons at 30 m.p.h. as the reasonable components of this key figure. Whether the key figure is made up of trains with 1,000 tons at 15 m.p.h., or 300 tons at 50 m.p.h., or 375 tons at 40 m.p.h., is immaterial. Everything depends on the kind of traffic which can be concentrated on the concentration centres, but in general outline I would build on a general structure of 500-ton trains, with heavier trains where the traffic is heavy.

I appreciate the point about the effect of increased loads on the speed of trains, but it is by no means the case that high speeds necessarily mean light loads. It is the other way about—low overall speeds and light loads often go together, because they arise from the same cause, namely the use of the steam locomotive running on rails for work of the omnibus type. The general type of standard wagon used arises from the same cause, as also do the operating factors which make for a signal delays, shunts for more important trains to pass, etc., all of which would be changed by a totally different method of operating, and a train of even 1,000 tons payload in a new type of wagon designed (both as to deadweight carrying capacity and as to bulk) to carry the traffic moving from the concentration centres (which, with the limited number of centres would be more controlled and less speculative) could be hauled at a high speed without strain. Five hundred tons loaded in, say, 20-ton wagons of light structure (no shunting, mark you) screw-coupled, and air-braked throughout, need not be limited to 30 m.p.h.

I have anticipated a decline in coal and mineral forwardings: that is all the more reason why train services should be so devised that the traffic which is available should be carried over the metals in the units which are most economic and so that a fall in traffic can be met by an immediate reduction in engine hours, which would be possible under my plan in a way that is not possible under the conditions that prevail in normal times on the railways.

I regret, therefore, that I am unable to share your pessimistic judgment of the plan. Emotionally, I would not mind the experience of a little pessimism for a change.

Yours faithfully,

FREDERICK SMITH

[Mr. Smith admits that "everything depends on the nature of the traffic which can be concentrated on the concentration centres," yet without any supporting evidence he makes the sweeping assumption that there will be sufficient traffic to justify a general policy of 500-ton trains composed of 20-ton wagons with heavier trains where necessary. We assume that Mr. Smith is referring primarily to general merchandise traffic and would suggest that from his railway experience he must recognise the practical difficulties associated with the concentration of such heavy tonnages at selected points, both for wagon and train loads. The small average size of consignments from one sender to one consignee, and the comparatively small number of towns between which heavy tonnages pass, are basic factors which cannot be blithely overlooked. To overcome them it would be necessary, presumably, to fix the concentration points a considerable distance apart, which naturally would increase considerably road costs in conveying traffic from and to the local stations concerned.

Further, on many sections of line the weight of traffic passing would probably make it necessary to introduce nominated-loading schemes restricting forwardings between specified points to one or possibly two days a week. Such a post-war proposition would hardly be likely to appeal to traders; would not meet the requirements of perishable traffic, and would seriously handicap the railways as compared with road on the point of "service," and might well lead to the trader preferring road service throughout.

The adoption of such methods, irrespective of the consequences, might make it possible, theoretically, to run such trains in a limited number of cases, but we would point out that the average length of haul of general merchandise traffic in 1938 varied from 52 to 77 miles on the various companies' lines and the implication that there could be a large number of 500-ton trains of 20-ton wagons running long distances without intermediate shunting, we suggest, is not well founded. Further, Mr. Smith carefully refrains from any comments on the effect at the forwarding and receiving stations. Concentration points, if they are to be limited in number as he suggests, would need to be appreciably enlarged from their present sizes and as these, generally, would be situated in the neighbourhood of large towns where space is limited and of high value, extensions, even if practicable, would be very costly. Further, any wide extension of the nominated-loading principle would involve either the provision of extensive storage accommodation at the concentration points or, alternatively, would mean a wide day-to-day variation in the traffic at the small stations which would be uneconomic.

We agree that there is ample scope for post-war improvements in the handling and movement of freight train traffic, but consider that sweeping generalities of the character put forward by Mr. Smith would founder on the rocks of practical difficulties. Although obviously he has none of the essential data as to tonnages, flow, and nature of traffic available, etc., it would be very interesting to see, broadly, how he would propose to apply his general principle of 500-ton train loads in 20-ton wagons to traffic from one of the eastern counties, say Norfolk, for which the concentration point would presumably be Norwich, indicating the probable effect on the arrangements at the local stations, both for short and longer distance traffic.—ED. *R.G.*]

Railway Travel in India 25 Years Ago

98, Albemarle Road,
York. November 4

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—A recent perusal of your interesting and, as usual, well-produced journal and a scrutiny of the rather taking advertisement in which an East Indian Railway "WU" class 2-4-2 tank engine is shown passing what might be the Taj Mahal at Agra, re-awakened a few memories of railway journeys I made in the Indian Empire during the years 1918 to 1920 while serving as an Ordnance Clerk at an Indian Arsenal.

Famous trains I travelled on were the Great Indian Peninsula Punjab Mail from Kalyan Junction to Itarsi; the same company's celebrated Poona Tea Car Express from Victoria Terminus, Bombay to Poona, and the East Indian Railway's Overland Mail from Jubbulpore to Calcutta and *vice versa*. These were the days when steam reigned supreme in India and to travel up and down the Ghats—especially by night—could be counted as a prime experience of a lifetime. The miniature Ghat section on the East Indian Railway is almost level by comparison with those Ghat inclines of the G.I.P.

Years—long years (in fact, when I was at school)—before I visited India I had seen a photograph of Itarsi, that junction up country set in the midst of nowhere, little dreaming then the day would come when I would have to change at Itarsi at 2 o'clock in the morning. This was in 1918, when I left the comfort of the Punjab Mail to join a congested local for Jubbulpore.

It might interest your readers to know that in those days several of the largest Indian railways had their nicknames, endowed by an appreciative travelling public. For example, the Great Indian Peninsula was referred to as the "Great Indian Parsee" line; the East Indian as the "Everlasting Iron" railway, and the Oudh & Rohilkhund as the "Old and Rotten" line.

The crack Indian Mail trains of that day were looked on as very important affairs, the European guards very pompous and smartly attired and, on the East Indian at least, the 4-6-0 mail engines looked exceptionally smart in their well-kept livery of Indian Red. The G.I.P. engines—brick red—were not so clean, and their stove pipe chimneys detracted from their appearance, though in other respects they were impressive looking machines. In those days we awarded the palm to the Bengal Nagpur for first class appearance, so far as locomotives were concerned.

Perhaps this letter might interest those of your readers who may happen to be in the Services today and whose lot has carried them to India, where they will no doubt do the same as I did, namely, travel many hundreds of miles at Government expense in the execution of their duties.

Yours faithfully,

NORMAN DUNCAN

The Scrap Heap

An overhead-iced refrigerator van of the Canadian National Railways recently carried 89,900 lb. of butter from Winnipeg to Toronto. In existing conditions, restaurants in Canada are allowed to serve only one pat of butter, weighing ½ oz., a meal; on that basis, the shipment would have been sufficient to cater for 4,315,200 diners.

* * *

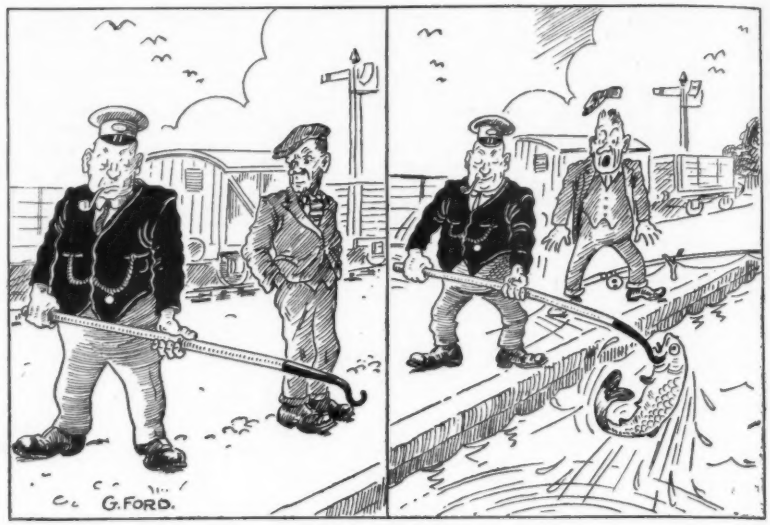
Roads as Memorials

Sir Charles Bressey, speaking at a dinner given in London recently by the Roadfarers' Club, suggested that in the replanning of London "many new arterial roads could be set aside as memorial avenues to some branch of the services, as, for instance, a dockside road as a tribute to the Merchant Navy."—*From "The Times."*

* * *

Driving His Own Engine

Manchester seems to have set up a world record of a completely new kind. Has it ever before happened that an engine-driver in ordinary, regular employment has been seen driving the engine which bears his own name and in his own honour? *The Railway Magazine* of November & December, 1943, has such a photograph. Driver Wilfrid Wood, of Manchester, is seen in charge of the engine which bears the title Private W. Wood, V.C.—an L.M.S.R. locomotive of the Patriot class. The two names are of the same person. Driver Wood got his V.C. in Italy in 1918. After that war he went back to the L.M.S.R. sheds at Stockport as a fireman, and from there went to Newton Heath as a driver in 1936. He is now driving larger engines than the Patriots, and when the streamline *City of Manchester* was named by the Lord Mayor of Manchester two months ago Wood was in the cab.—*From "The Manchester Guardian."*



Rod, pole, and perch

Rail Saboteurs

Railways keep the life-blood of a country's war effort flowing. That is why the R.A.F. ceaselessly bomb the enemy's railways. But there is more than one way of hampering the railways in their all-important work, and not the least among them, in reference to ourselves, is for the public to travel on unnecessary journeys when every truck and carriage is increasingly needed for war purposes.

In the first six months of this year there were 56,000,000 more passenger journeys than a year before. A proportion were, no doubt, necessary. There is equally no doubt that many of them were not, and such superfluous travel is as harmful to our war effort as bombing by the Germans would be.

The selfish railway traveller is a saboteur, who is none the less culpable because he or she is animated by selfishness and not by treachery.—*From "The Daily Sketch."*

* * *

A mysterious siren—sounding something like a high-pitched "All clear"—was heard by East Enders on their way to work one morning last week. Civil Defence authorities at Stepney, Poplar and Bethnal Green denied responsibility for it. Subsequently the mystery was solved. The "siren" was the whistle of an American railway engine drawing an L.M.S.R. goods train on the Liverpool Street—Stratford line. The whistle had jammed.—*From "The Evening News."*

* * *

Fuel Economy on L.M.S.R. Locomotives

Some 16,000 tons of coal a day are consumed by 27,000 L.M.S.R. trains. On the Euston-Glasgow run locomotives such as *Coronation* require eight tons, or six to eight shovelsful every two minutes. Controlled firing and efficient use of dampers, assisted by skilful driving, is ensuring that the utmost energy is obtained from every shovelful. In addition to regular firing-instruction classes for firemen, special firing instructors ride with young firemen on the footplate and show them in practice the best and most economical firing-methods.

* * *

Tailpiece

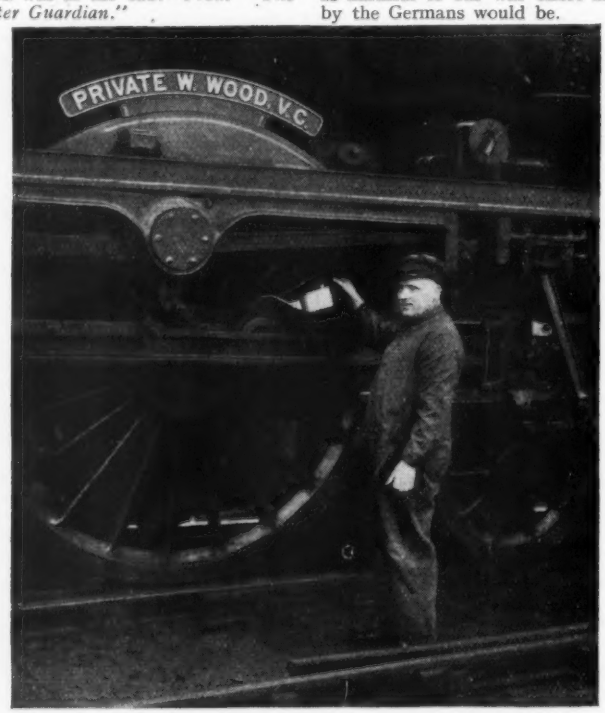
(The railways, with depleted staffs, are now carrying half as much traffic again as before the war)

Peacetime traffic used to run
Busily on branch and main.
Now, before the war is won,
In these days of strife and strain,
There is half as much again.

Staffs were still, not long ago,
Adequate on line and train,
Porters hovered row on row,
Taxis were not hailed in vain—
But traffic's half as much again.

Winter fog and ice we knew,
Drifted snow and flooding rain.
Now there's other trouble too,
Blackout, bombs, unceasing strain,
And traffic half as much again.

E. C.



Block courtesy [*The Railway Magazine*

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

UNITED STATES

Load Limitation

As has been mentioned at various times in *The Railway Gazette*, certain States in the U.S.A. have laws in force, ostensibly in the interests of safety, limiting, especially on heavy grades, the loading of passenger and freight trains to maximum numbers of vehicles. At numerous State frontiers it has been necessary to reduce trainloads, although on a number of occasions the railways, under the stress of war conditions, have defied these enactments; and in several recent instances actions brought by the States concerned against the railways have failed to secure convictions.

The Interstate Commerce Commission, Service Order No. 85 of which in effect directs the railways to disregard the train-limit laws of Arizona and Oklahoma during the emergency, has asked the interested parties to file briefs discussing the Commission's power to issue such an order, and the railways operating in those states—the Santa Fe, Southern Pacific, Missouri-Kansas-Texas, Kansas City Southern, Missouri Pacific, St. Louis-San Francisco, and Chicago, Rock Island & Pacific—have prepared a brief justifying the Commission's action. Furthermore, they have answered the contention of the unions, that disregard of these laws reduces employment, by stating that as all their locomotive power is fully employed, rigid train limitation can only result in congestion and in consequent delay to essential shipments.

Northern Pacific 4-6-6-4s

Among the largest buyers of articulated steam locomotives in the U.S.A. are the companies the main lines of which run through the mountainous areas of the western states, where the power of these large machines is of the greatest value for the economical operation of heavy loads over long continuous grades. Lately, the Northern Pacific Railway has increased by eight, to a total of 48, its number of 4-6-6-4 locomotives built by the American Locomotive Company. These have each four 28-in. by 32-in. cylinders; 5 ft. 10 in. driving wheels; 260-lb. pressure; a tractive power of 106,900 lb.; and a weight in working order of 287½ tons, 195 tons of which is available for adhesion. "Commonwealth"-type 14-wheel tenders are provided, with accommodation for 27 tons of coal and 25,000 gal. of water. All these engines have been acquired since 1936.

Two locomotives of the same type are being built by the American Locomotive Company for the Spokane, Portland & Seattle Railroad, the subsidiary by which the Northern Pacific Railway obtains access to Portland.

Composite Wood-and-Steel Hopper Wagons

The recent release by the War Production Board of additional steel for the railways has made possible an addition to the wagon-building programme, and included in this are 4,000 more bogie hopper-wagons, each of 50 tons capacity, now under construction for the Southern, Central of Georgia, Louisville & Nashville, Chesapeake & Ohio, and Atchison, Topeka & Santa Fe systems. In each of these wagons, by the substitution of timber for steel, 2½ tons of the latter is being saved, reducing the tare from 20¼ to 17¾ tons as compared with an all-steel hopper wagon of corresponding size. The wagon sides are of timber construction, as is the floor as far as the beginning of the hopper bottom, which is of steel. Pressed-steel side-posts and braces are used, the former of $\frac{5}{16}$-in. and the latter of ¼-in. material, but the centre post is of Z-bar and angle construction. The use of timber cuts down the inside width of each wagon from 10 ft. 4 in. to 9 ft. 6½ in., and reduces the cubic capacity from 2,145 to 1,970 cu. ft., or from 2,408 to 2,233 cu. ft. if the load is heaped 10 in. above the wagon top. Substitution of timber for steel is likely to reduce the life of the wagon, as is also the fact that copper-bearing steel is no longer available, so that corrosion loss may increase. But such measures, of course, are only for the duration of the wartime emergency. *(See editorial note, page 526).*

BRAZIL

Passenger Movement in Rio de Janeiro

A total of 827,620,356 passengers, corresponding to a daily movement of 2,267,397, was registered as having been conveyed in Rio de Janeiro and suburbs during 1941. Trams carried 606,066,859 persons (76,187,688 more than in 1938), and buses, 117,226,527 (or 26,044,478 more than in 1938). The suburban trains of the Central Railway accommodated 76,287,620 passengers, and the Leopoldina Railway suburban service, 24,793,097. The mountain tramway up the Corcovado carried 119,943 passengers, and the ferry service to and from the islands of Paquetá and Governador in the Guanabara Bay, 3,126,310.

The Federal District fiscal barriers recorded 2,234,400 passengers and 901,062 vehicles entering and leaving the city of Rio de Janeiro, where the totals of motor cars and buses registered numbered 39,688 and 922, respectively.

Ingoing and outgoing passengers at the terminal stations of the Central and Leopoldina Railways amounted to 24,383,011 and 1,046,441, respectively.

Madeira-Mamoré Railway

Considerable activity is taking place in connection with the Madeira-Mamoré Railway. This line was built under tremendous difficulties, and with great sacrifice of life, at the height of the search for rubber in the valley of the River Amazon, some time before the Malay States and the Dutch East Indies became competitors. It was completed only in 1912, when it was too late to have any appreciable influence on the development of rubber extraction deep in the Amazon valley.

In 1851 the U.S.A. Minister of Marine ordered a certain Lieutenant Gibbon to study a proposed location of a line along the River Madeira from Bolivia to Belem, but a series of misfortunes delayed the development of the plans. In 1871, President Grant sent Commander Thomas O. Selfridge to survey the region of the Rivers Madeira and Amazon with a view to establishing commercial routes between the U.S.A. and South American countries. After a short time, however, due to insupportable conditions and great loss of life, the survey had to be abandoned. Later, the Bolivian National Transport Company was formed, with a capital of £600,000, and work was started again; but because of shortage of labour the company suffered the same fate as previous enterprises.

In 1874, the American firm of Dorsey & Caldwell took over, but in 1878, that undertaking, pursued by the same misfortunes as its predecessor, abandoned the railway. The challenge was taken up by the firm of Philadelphia P.T. Collins, but the jungle remained impenetrable, and malaria, yellow fever, and beri-beri claimed their toll of hundreds of pioneers for each yard of proposed track. After being abandoned once again, the railway was put in the hands of a Swedish engineer, Herr C. C. Morsing, in 1884.

It was not until 1903, however, as an outcome of the Treaty of Petropolis, whereby Bolivia ceded the Acre Territory to Brazil, that Brazilian engineers began to defeat the innumerable difficulties and to show some progress, under the supervision of Senhor Joaquim Catramby. Little of what happened afterwards has been recorded, except the inception of the Madeira-Mamoré Railway with Mr. Percival Farquhar as Director. At that time the purchase price of the line was put at $11 million. In 1912 the last rails were laid in the town of Guajará-Mirim, on the frontier of Brazil and Bolivia. The cost to Brazil of building the railway was estimated at the time at $15 million but it is believed that the actual cost was twice that amount.

Due to the war and the loss of rubber supplies from the East, this railway is destined to play a great part in the supply of rubber for the war effort of the United Nations. (The rehabilitation of the line has already been referred to in *The Railway Gazette*, in the issue of October 8 last).

SWEDEN

Private Railways Results

Combined working receipts of the Swedish privately-owned railway companies in the first six months of the current year amounted to kr. 81,100,000, against kr. 72,600,000 for the same period of 1942. Compared with the first six months of last year, passenger receipts increased by 15 per cent. to kr. 28,600,000, and goods receipts by 10 per cent. to kr. 48,900,000. Expenditure in the period under review rose to kr. 60,400,000 from kr. 55,200,000, and the working surplus amounted to kr. 20,700,000 (kr. 17,400,000). Allocations to renewal funds totalled kr. 5,300,000 (kr. 4,700,000); and taxation absorbed kr. 3,400,000 (same), and interest service, kr. 2,200,000 (kr. 2,400,000). Miscellaneous expenditure amounted to kr. 600,000 (kr. 500,000). The net profit for the first six months of 1943 was kr. 9,200,000, compared with that of kr. 6,400,000 for the same period of 1942.

State Railways Results

The gross profit of the Swedish State Railways in the first half of 1943 amounted to kr. 255,000,000, or kr. 19,000,000 more than in the same period of 1942. Passenger receipts accounted for kr. 96,000,000, compared with kr. 84,000,000; and goods receipts rose by kr. 7,000,000 to kr. 159,000,000. Expenditure increased from kr. 171,000,000 to kr. 187,000,000, including an allocation to renewal fund of kr. 16,000,000 (kr. 15,000,000). The working surplus amounted to kr. 68,000,000 (kr. 65,000,000). A sum of kr. 20,000,000 was needed for interest on invested capital, and the net profit for the first six months of the current year was kr. 48,000,000 (kr. 45,000,000).

A National Transport Trust

Proposed by Mr. Bertram Darell Richards, B.Sc. (Eng.), M.Inst. C.E., in a paper, "Post-War Transport in Great Britain," read before the Institution of Civil Engineers on November 23

MR. B. D. RICHARDS commenced his paper with a review of the general outline of the transport system of this country and a consideration of the various components of that system. The latter he enumerated as canals, railways, coastal shipping, motor road transport, electric trains, trams, and trolley buses, and air transport. He put in the table below:—

System	Passenger transport	Goods transport
(*a*) Canals	—	Heavy slow goods traffic.
(*b*) Railways	Long-distance traffic	Heavy goods traffic for long distances at medium speeds.
(*c*) Coastal shipping ...	—	Heavy goods traffic between ports on the coast or on navigable rivers and canals.
(*d*) Motor road transport	Short and medium-distance passenger traffic. Feeders to railways. Touring.	Light high-speed goods traffic and conveyance of perishable goods, for short and medium distances and at irregular intervals. Feeders to railways.
(*e*) Electric trains, trams, and trolleybuses.	Passenger transport in and around large centres of population.	—
(*f*) Air transport	Long-distance high-speed passenger transport.	Long-distance, high-speed transport of light and valuable goods.

Dealing with the various systems he suggested that:

(i) Canals were suitable for the regular conveyance of heavy goods between fixed points. They were more useful in heavily industrialised areas and for such traffic as coal, ore, etc., where speed was not important.

(ii) Coastal shipping was suitable to the same class of goods as canals for conveyance between coastal ports.

(iii) Canals, railways, and coastal shipping (in regard to ports) were for traffic between fixed points: they involved heavy capital expenditure and could be extended only at great cost.

(iv) Road transport was far more elastic, as vehicles could go anywhere on the extensive network of roads; apart from the cost of the roads, the capital expenditure involved was relatively small.

(v) Air transport was at present limited as to capacity. Its main advantage was speed but the possibility of utilising that advantage depended largely on the terminal facilities and the length of the journey.

Mr. Richards said that even at the present time there were 68 different railway companies, although only four were of major importance. The effect of duplication was that the present railways had a potential carrying capacity far in excess of the demand. The Railways Act of 1921 brought competition virtually to a close by compulsory amalgamation, but as the four main-line companies' lines overlapped to a certain extent some internal competition had remained; after the traffic pool agreements, made in pursuance of the recommendations of the Royal Commission on Transport, 1933, this had ceased.

Remedies

He said that each transport system had been in turn a subject for investigation and inquiry, but this had been generally too localised in the sense that it had been appreciated only recently that each system should be regarded as complementary to the others. A new system of transport might restrict the sphere of activity of existing systems without rendering them obsolete, but if allowed to compete with them it might jeopardise their existence without furnishing a full substitute for them.

It followed that, on broad lines, the basis for any rationalisation of the transport system should be as follows:—

(i) The transport system should be viewed as a whole. The units of the system should be regarded as complementary, and to each unit should be assigned a definite sphere.

(ii) The employment of any unit should be controlled so as to limit it to effective service within its own sphere and to foster it therein.

(iii) Each unit should, so far as possible, be self-supporting, but this should not be the sole criterion of its survival; if it served a useful purpose warranting its retention, it should be supported by the transport system as a whole.

(iv) Competition in transport should be eliminated and the interests of the public should be safeguarded by regulation.

If reorganised on these basic principles, the transport system as a whole would secure an efficient service to the public, and could be self-supporting without excessive charges detrimental to trade or the public. Transport was a public utility, and whilst it might be neither necessary nor expedient to nationalise it, it had to be considered essentially on a national basis.

In pursuance of the principles enunciated, a scheme had been drawn up in outline for the rationalisation of the transport system. The purpose was to secure a co-ordinated system with the minimum of dislocation of the existing units. The method proposed was financial amalgamation of the units included to form a transport trust, with a Central Board of Control formed principally from representatives of the different units.

Proposed National Transport Trust

Units included in the proposed National Transport Trust would be: railways, classified roads, canals (excluding ship canals), coastal shipping ports and parts of ports owned by or leased to coastal shipping services, motor road passenger transport services.

The following services should be independently owned and operated, but should be subject to a measure of regulation as regards conditions of working and rate tariffs: Motor road goods transport, canal shipping, coastal shipping.

To be included or excluded as might be determined later: airports (for internal services), air passenger services (internal), air goods transport (internal).

Units excluded would be: local passenger transport services within town limits operated or regulated by local authorities, and the London Passenger Transport Board and any similar amalgamation of local passenger services in densely populated areas that might be formed.

Administration of Each Unit

The four main railways would continue to operate under their individual managements, under the general direction of a Joint Executive Committee comprising a representative of each company. The 64 minor railway companies, which own 4 per cent. of the total track, should either be amalgamated with the major companies, or alternatively, continue to operate individually but under the control of the above-mentioned committee; in the latter case the 64 companies should have one joint representative on the committee.

The whole of the classified roads to be controlled by a Roads Board with powers to take over any existing road as a classified road, to construct new roads, and to widen, improve, and maintain the classified roads. The Roads Board would essentially fulfil the functions of the Roads Department of the Ministry of Transport. The road system should be planned on a national basis and the planning should be co-ordinated with the work of any Central Planning Authority that might be constituted.

The whole of the canals, excluding ship canals, should come under review. Those adapted to form a useful part of the transport system should be grouped. Each group would have its own management, but the whole would be under the general direction of a Joint Executive Committee comprising representatives of the main groups. Railway-owned canals should be included in the review.

A Coastal Shipping Port Board should be constituted to acquire and control all ports used exclusively for coastal shipping and to lease or otherwise control coastal shipping facilities at ports having a mixed trade. Railway ports should be included in so far as coastal shipping is concerned.

A Road Passenger Transport Board should be constituted to acquire and control all services other than local services in towns operated or controlled by local authorities. The board should have powers to open or close services as necessary and to extend them or contract them, and generally to administer all road passenger transport subject to the general control of the Transport Council.

The motor road goods transport should be carried on as at present by operators under the control of the Licensing Authority, which should come under the jurisdiction of the Transport Council. It should be the object of the Licensing Authority so to apply its powers as to regulate both the quantity and the size of the vehicles using the roads. In some cases it might be expedient to transport certain goods by road in vehicles of large size in preference to using the railways. The use of large and heavy vehicles should not be entirely prohibited, but by discretion in the grant of licences and by the imposition of duties on a sliding scale, the proper distribution of traffic as between road and rail could be maintained.

Coastal shipping would be independently owned, as at present, and control of it would be only indirectly exercised through the Coastal Shipping Port Board. Traffic to which coastal shipping was specially adapted would be stimulated by favourable port dues.

Canal shipping would be owned by canal hauliers, as at present, or in special

cases by the canal groups. The National Association of Canal Carriers should have a representative on the Canals Executive Committee.

Whether air transport should be brought into the general transport system should be a matter for consideration. If there was very great expansion of internal air services, it probably should be included. The limitations of air transport as to capacity and cost would appear to render it unlikely, for some time at any rate, to offer any competition on a scale detrimental to other transport service.

There would thus be five transport branches included in the scheme and a licensing authority dealing with motor goods vehicle licences. A seventh, Air Transport Board, might possibly be added later. These various bodies would manage their separate interests under the general control of the Transport Council.

Constitution and Functions of Council

The Transport Council should comprise a whole-time President and Vice-President, both to be appointed by the Government, and one representative of each of the six bodies as above.

The duties and powers of the Transport Council should include:—

(1) To take over the railways, the canals to be included in the groups, coastal shipping ports, road passenger transport services, the classified roads, and the Licensing Authority by purchase or transfer as appropriate.

(2) To exercise general control over the executive committees, boards, or authorities administering these six services, and in particular to sanction major capital expenditure, extensions or restrictions of service, and rates and tariffs.

(3) The transport council should have powers to vary tariffs within limits without special authority of Parliament.

(4) To control the pooled receipts of the transport systems and to direct the general finance as a trust.

(5) The object of the Transport Council should be to secure that each transport unit should serve the specific purpose to which it is adapted: to eliminate all competition between or within the units: to develop and operate transport as a national utility and to safeguard the interests of the public. Their control would be mainly exercised through the tariffs and licensing system. The constitution of the Council indicates that it would be in a large measure a co-ordinating body.

Finance

The capital should be furnished by the issue of stock or bonds at fixed rates of interest in a manner similar to that adopted by the London Passenger Transport Board. The capital would be devoted to the purchase of the various systems to be acquired and to the extensions of such systems, as, for instance, the construction and improvement of classified roads.

The sources of revenue of the undertaking which might be designated the National Transport Trust would be:—

(1) Railways. Fares, freights, and dues from ancillary undertakings.

(2) Roads. No direct revenue.

(3) Canals. Tolls and indirect revenue as at present.

(4) Coastal shipping ports. Dock and harbour dues.

(5) Motor road passenger transport service. Fares.

(6) Licensing Authority. Motor tax on vehicles.

Of the six units, four were both revenue earning and spending units: one (roads) was a spending but non-revenue earning unit: the sixth, the Licensing Authority, was revenue earning but non-spending.

Each unit would be self-administered subject to the general control of the Transport Council as set out. The net profits would be paid into the general pool and would be devoted to: Service of bonds and interest on stock; expenditure on extensions and improvements; reserve fund. Any excess would go to the reduction of rates and tariffs.

A study of the growth of transport in Great Britain led to the conclusion that to rationalise it, it had to be treated as a whole and on a national basis, each service being considered as complementary to the others. Transport was in every sense a public utility, and the public interests appeared to be served best by eliminating competition and substituting regulation.

The scheme proposed implied the amalgamation of the principal transport services under a single financial control operating as a public trust, and a measure of control, without ownership, of certain subsidiary services. In most cases the present management would remain practically unchanged, but the profits of the various systems would be pooled and their administration subject to the general control of the Transport Council, which would be the governing body of the National Transport Trust, though its functions would be largely co-ordinating.

The trust finances should be entirely independent of the national exchequer and any contribution to the latter should take the form of an annual payment at a fixed percentage on the issued capital of the trust.

The Transport Council should have very wide powers subject to statutory limitations and to the appointment of the President and Vice-President by the Government.

Discussion

Mr. W. T. Halcrow opposed the elimination of competition in transport. He said that in his view if there was no competition progress would be slow and haphazard.

Major-General Gilbert Szlumper said that as he saw it the post-war situation might be either a return to pre-war competition, a combination of all forms of transport with some central direction, or nationalisation. He had no hesitation in saying that the second course was the only one likely to lead to the improvement of transport. He ruled out a return to pre-war conditions as impossible, and he also ruled out nationalisation. Every country which had had nationalisation of railways had suffered disaster from it. The business of a government was to govern and not to run industries. In his view, the author's proposals went too far in some directions and not far enough in others. Classified roads were open to the use of all and sundry, and not merely to commercial transport. The only roads that he would wish to see included in the scheme were special motor roads which could be built and maintained by revenues raised from tolls. It would help to reduce the slaughter on the roads if certain traffic was diverted to special roads, and it would also help to equate the difference between railways and roads. He felt that road haulage had got to be included in any national transport undertaking. All forms of transport should be directly interested in the carrying of the total amount of traffic available, and he felt that the country's traffic had a sufficient net revenue potential to serve the needs of all forms of transport, provided that they were used in the best and most economic way.

Sir Frederick Cook said that road and rail were the predominating factors in our transport system, and would be as long as could be foreseen. Any scheme should be self-supporting as a whole, and unremunerative services should be kept in use if in the general interest.

Mr. R. J. Howley said that the first portion of the paper disappointed him because it paid little attention to the technical development of transport and that was what most of the members of the Institution were interested in. The second part was controversial and raised political issues. After this war we might expect increased travel and a greater volume of goods and parcels traffic as a result of the better standard of living for the people. He was not pessimistic as to the future of the railways, provided that they were brought up to date. He believed that there would be enough traffic for both road and rail.

Sir William Wood, President of the London Midland & Scottish Railway Company, whose comments on the paper were read by Mr. W. K. Wallace, agreed that the time had arrived for the transport system of the country to be viewed as a whole, and said that it was the lack of that viewpoint which had caused what was termed the transport problem. The author had not referred to the differences in treatment of the forms of transport which had arisen from that lack of vision and that lack of equable treatment by Parliament which the parts of the transport industry should have, but had not, received. When the railways had been projected it had been necessary to promote Bills in Parliament to authorise them. Parliament had also regulated railway charges and fixed maximum tolls, and later had authorised and *required* the conveyance of passengers and merchandise with a more elaborate classification of charges. The same principles of requirement to carry and regulation of charges, though with closer control of charges, still applied. The advent of modern road transport not subject to classified charges had upset the theories of 100 years, and although removing the reason for many of the controls on railway affairs, these controls had continued. That was a root cause of the problem not mentioned by the author, and any consideration of the subject under discussion could not burk it. He considered the author's viewpoint of the problem unsound, because he regarded it as one of co-ordination to be achieved by eliminating competition and substituting regulation by State purchase. Any such step would leave dissimilar charging systems, and co-ordination of unlike quantities was not easy. Sir William Wood also thought it unsound to allocate traffic between the means of transport on a functional basis.

Commenting on some matters on that section of the paper dealing with railways, Sir William Wood pointed out that the length of track was not 20,000 miles but 36,000 miles, or 52,000 miles including sidings, and that 20,000 miles was the length of road which might have one or six tracks. It had been stated that even now there were 68 different railway companies, but 20 of these were parts of the four main-line railways, 22 were not working companies, and the remainder were light railways, except a couple of distinct railways in the ordinary sense, such as the Mersey and the Liverpool

Overhead. He was not aware of the alleged difficulty in raising new capiital for necessary purposes. None was spent unless it was economically justified, and the balance sheets of the railway companies showed large liquid resources.

He found himself in complete disagreement with the proposal for a Transport Council responsible to, and appointed by, the Government, which would take over some transport services and issue in payment stocks to be remunerated by the results of working by a Board not responsible to the owners of the property it managed. The proposal was made without any indication of inefficiency on the part of the existing undertakings in conducting their affairs under a system, which had not viewed transport as a whole, but instead had a variety of conflicting enactments which had made that impracticable and had caused much waste of the national resources. To correct these errors was the appropriate remedy.

Mr. Robert Kelso explained the differences between tramp and liner coastal shipping, and said that the liner companies, which had been requisitioned during the war, had every intention of continuing after the war the close co-operation which had been imposed on them during hostilities. They were bent on unifying all points of contact in the coastal trade, including staffs, stevedoring, and so forth. There were one or two things that they would wish to have modified, including agreed charges. The coastal shipping industry also expected the railways to carry goods to ports at a rate at not more than that between two inland places. It also felt that cut railway rates between two port areas should be abolished.

Sir Joseph Nall, M.P., said that one of the points which was frequently overlooked in discussions of this kind was the extent to which the public and traders would submit to being told that they must travel by road or rail, or that they must use a specified kind of transport.

Mr. J. S. Tritton said that the people who had been left out of the scheme were the consumer and the engineer. Both of these were interested in the speed of transport which was the keynote in the development of transport.

Mr. J. S. Nicholl said there could be no rigid division of function without a marked loss of efficiency. Regulation was never an active producer of efficiency, and he felt that the author of the paper did not perhaps appreciate fully the depth of some of the matters involved in a reorganisation scheme of the kind he projected. He did not wish by that to infer that he thought there would not be great changes in transport in the next ten years. He thought there would be, but he felt that the best way of tackling the problem of transport was to take one step at a time.

Mr. J. T. Evans explained the difference between narrow and wide inland waterways, and paid particular attention to the uses and facilities offered by esturial waterways. He said the great disadvantage from which waterways suffered was the diversity of ownership.

Mr. R. W. Sewill said that it was hoped shortly to weld together all the major road associations, and he thought that some body such as that which would be evolved might be given authority rather than the licensing authorities.

American Army Engineers' Training

EXPERIENCE gained by the American Expeditionary Force in France during the last war, and in Pacific bases more recently, has resulted in certain definite lines along which the U.S. military engineer training is now being run at West Claiborne.* Instead of large specialist units, the general service regiment is now the basic unit of the organisation and training. It is about 1,300 strong, made up of six companies each of about 176 men and a headquarters company of 134 of various ranks. Of the 45 officers, only 18 are specially trained in combat and pioneer operations; the remaining 27 are engineers with some kind of general constructional knowledge. Similarly, 1,058 out of the 1,241 enlisted men are skilled construction mechanics or craftsmen, military N.C.O's, or specialists.

There is, however, another type of regiment known as the special service regiment for supplying skilled supervision of local labour in field construction operations. It has considerably larger numbers of men in certain trades than the general service regiment, notably 202 truck drivers and 29 general auto mechanics, figures about double those in the G.S. regiment. On the other hand, the latter unit has 54 (7) demolition men, 115 (14) carpenters, 56 (7) electricians, 58 (39) general mechanics, 55 (25) riggers, 54 (0) quarrymen, and 54 (0) jack-hammer operators; the S.S. regimental figures are shown in parentheses. Though the G.S. regiment has 54 quarrymen and no quarry foremen, the S.S. unit has 25 quarry foremen but no quarrymen.

Then, in addition, there are specialist companies or detachments to supplement these regiments, ranging, for example, from engineer heavy workshop companies with 5 officers and 193 men—nearly all of them specialist tradesmen—down to welding and cutting units 21 strong. Other specialist companies carry out maintenance, equipment, forestry, supply, constructional tip-truck, and depot duties. The largest of these units, however, are the petroleum distribution companies, about 275 strong, which go into the field complete with piping, pumps, and tanks for supplying advance units, without recourse to tank truck distribution. An equipment company is provided with such machines as cranes, large excavators, rock crushers, concrete mixers and pavers, and gravel screening plants.

The equipment of a G.S. regiment includes for each of its six companies such items as an angledozer and trailer, compressor set, petrol-driven chain saw, three sets of demolition equipment, six trucks of various sizes fitted with winches, and four trailers, and three machine-gun carriers. The headquarters company has a very much wider range of equipment, including a travelling workshop, electric lighting, water supply, cutting, and welding plant, as well as larger numbers of units similar to those supplied to the other companies.

Though not included in the original programme at Claiborne, the training of engineer units for railway operation has also been carried out there. Several railway battalions were trained there last year, but the training and organisation of these units has now been transferred to the Transportation Corps.

A feature of the training of the larger units is the application of camouflage and tactical principles in field operations. Officers have to provide necessary roads and training areas, with as little disturbance of existing roads, trees, and ground formations as possible; this practice gives them experience in developing natural protective concealment for their units in the field.

Officers for the new units are recruited from three sources (1) from other units, (2) from civil life, and (3) from the officers' training school at Fort Belvoir. Those from civil life usually have engineering and construction experience, but have to undergo a six weeks' intensive course in military discipline and routine, company administration, equipment and supply, tactics, scouting, patrolling, and the handling of small arms, and machine weapons. This preliminary course also includes training in bridging, rigging, field fortifications, and other subjects they have subsequently to teach their men. During the course, the officers are organised in companies and as if they were in the ranks. Special emphasis is laid on leadership and ability to handle men, and on the officers being entirely responsible for the health and welfare of their other ranks day and night.

An important feature in the general training programme is the training of "cadres" or nuclei for future units. The cadre of a regiment consists of 7 officers and 95 men forming the administrative and "Q" units of the regiment. New engineer regiments are also officered by men drawn from the large pool of senior officers at Claiborne who have completed the officers' training school course and are serving with units in training. The remaining junior officers come from Fort Belvoir.

There are also 28 specialist schools at Claiborne, namely in rigging, demolition, timber work, carpentry, smith's work, electricity, electric and acetylene welding, motor maintenance and driving, heavy construction equipment, well sinking, sign painting, drawing, mapping, surveying, water purifying, supply, plumbing and pipe fitting, signal communications, gas, weapons, camouflage, company administration, mess management, cooking and baking, as well as heavy shop trades. The numbers of men sent to each school and the time spent in it varies considerably.

Bridging training is considered specially important, and is a part of the regular training of the majority of the men in both G.S. and S.S. regiments. It includes the erection of fixed and portable bridges, and pontoon bridges, though pontoons are not part of the equipment of these regiments. Timber trestle bridges built by the units undergo severe tests under actual tank loading, and each unit has to know how to assemble and erect the standard army "H-10" bolted-truss spans. The co-ordination and variety of training of the individual soldier, as opposed to speed in completing the work, is stressed in bridge building.

Simple methods of road making are taught to both classes of regiment, and also emergency measures such as the provision of corduroy wire-mat roads and footpaths, and plank roads.

The whole period of training aimed at at Claiborne is now 13 weeks or longer. All units at this training centre are under the command of General Schulz and his staff, but the actual training of units is left very much in the hands of their own officers, we learn from our American contemporary *Engineering News-Record*.

* Details of the construction of the Claiborne & Polk Military Railway by the U.S.A. Military Railway Service were given in our March 19 issue

New "Santa Fe" Type Locomotives for Spain

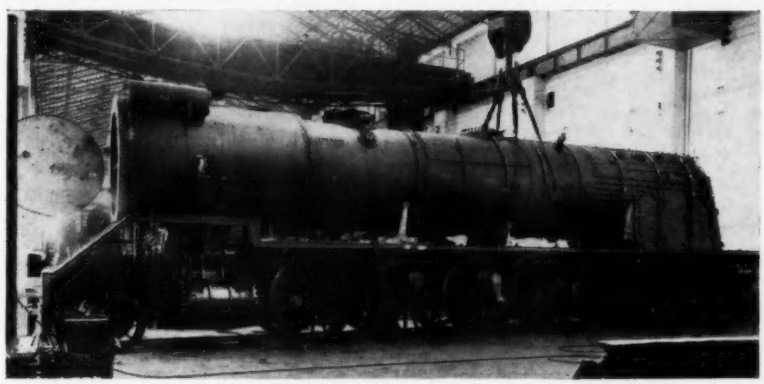
Twenty 2-10-2 tender locomotives are being built in Barcelona for the National Railways of Spain

TO deal with heavy trains over the steeply-graded railways in mountainous Spain an exceptionally powerful type of locomotive is needed and some time ago the National Railways of Spain placed an order with La Maquinista Terrestre y Maritima of Barcelona for 20 tender locomotives of the 2-10-2 or "Santa Fe" type for operation over the 1·67 m. (5 ft. 5¾ in.) gauge system. The first of these engines has been completed and subjected to trials with very satisfactory results.

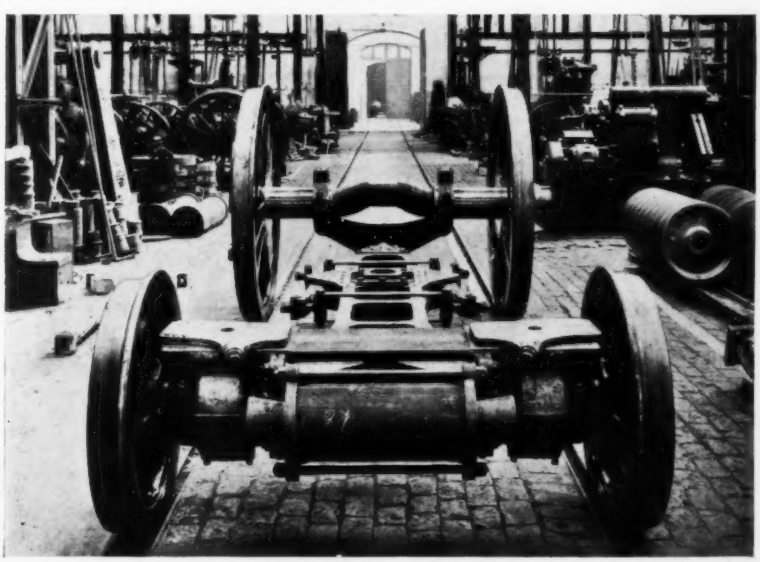
An engine with five coupled axles would normally have a rigid wheelbase of exceptional length; this engine is required to negotiate curves of 250 m. radius (820 ft.); consequently the leading end is carried on a Krauss "bogie" in which the forward truck or bissel is connected with the first coupled axle and the latter is given a play of 20 mm. (0·866 in.) on each side to permit lateral displacement. This displacement throws the axle out of alignment with the remaining coupled axles and is towards the outside of the curve being negotiated. The thickness of the wheel flanges for the third and fourth coupled axles is reduced 12 mm. (0·472 in.) to limit still further the constraints due to a long rigid wheelbase. The axles of the leading and trailing trucks are equipped with S.K.F. roller bearings.

There are three cylinders with cranks arranged at 120°. Steam is distributed to each cylinder independently; Walschaerts mechanisms are used but admission and exhaust is by means of Lentz valves operated by oscillating cams. Main particulars are:

Cylinders (3), dia. ...	0·570 m. (22·4 in.)
,, stroke	0·750 m. (29·5 in.)
Coupled wheels, dia ...	1·560 m. (5 ft. 1½ in.)
Evaporative heating surface—	
Tubes	267·57 sq. m. (2,880 sq. ft.)
Firebox	26·15 sq. m. (281 sq. ft.)
Total	293·72 sq. m. (3,161 sq. ft.)
Superheating surface ...	140·90 sq. m. (1,516 sq. ft.)
Combined total ...	434·62 sq. m. (4,677 sq. ft.)
Firegrate area	5·3 sq. m. (57 sq. ft.)
Boiler pressure	16 kg. per sq. cm. (227·6 lb. per sq. in.)
Tractive effort (65 per cent. b.p., half worn tyres) ...	25,000 kg. (55,100 lb.)
Adhesion weight	105,000 kg. (103·5 tons)
Weight of engine in working order	140,000 kg. (137¾ tons)
Water capacity of tender...	28 cu. m. (6,160 gal.)
Coal capacity of tender ...	8,000 kg. (7¾ tons)
Weight of tender, full ...	60,000 kg. (59 tons)
Total weight of engine and tender	200,000 kg. (196¾ tons)



Engine in advanced stage of erection



Krauss bogie at leading end of locomotive

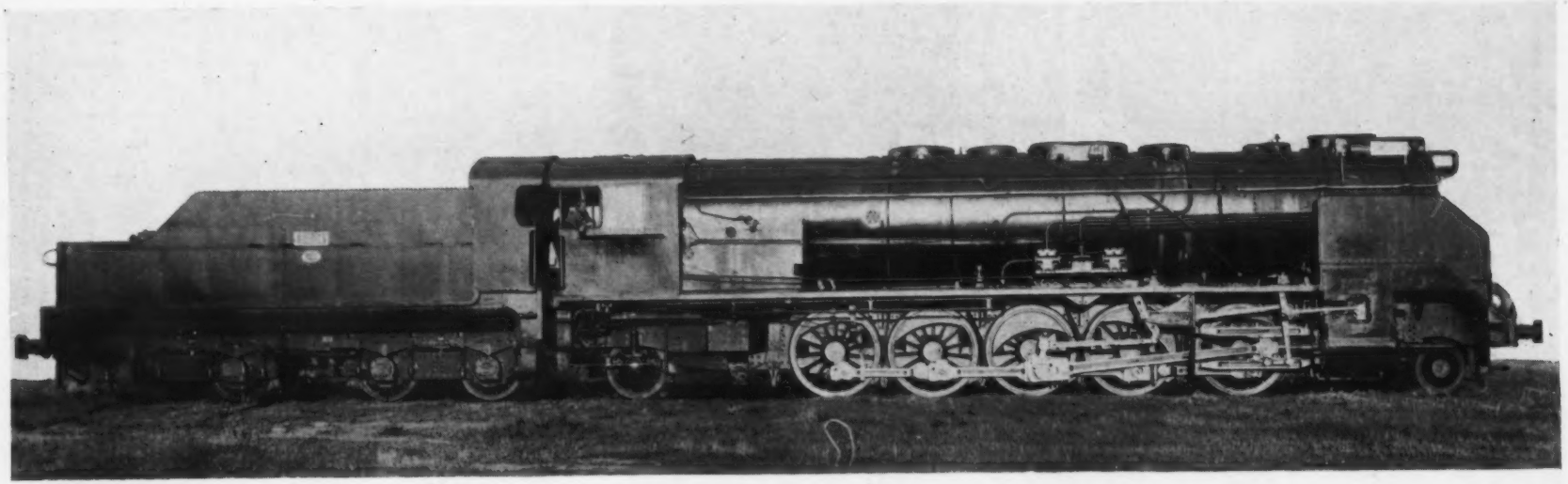
The superheater is of the Schmidt pattern and is proportioned to give a final steam temperature of 380° C. (716° F.). The regulator, which is of the Wagner floating-valve type, is mounted in an extension of the superheater header and there is an auxiliary valve for saturated steam. For running with a closed regulator there is an arrangement for opening the admission valves; this is actuated by a steam piston. A Kylchap blast pipe with double chimney is fitted.

The operation of the locomotive brake is by steam; two cylinders give the necessary power. The tender is equipped with a vacuum brake. Locomotive and tender brakes work simultaneously on operating a Superdanton ejector, because the latter automatically opens the steam valve for the locomotive brake. Boiler feeding is accomplished by an A.C.F.I steam feed-pump which deals with water that has been heated by exhaust steam. There are also two Friedmann injectors.

Lubrication both of the mechanism and of the axle boxes is by Friedmann pumps.

Other equipment of the locomotive includes a Wagner water purifier, an Egui grate, Gresham sanding gear, a Hasler teloc speed recorder and an installation of electric

(*Continued on page* 544)



General view of "Santa Fe" type locomotive, National Railways of Spain

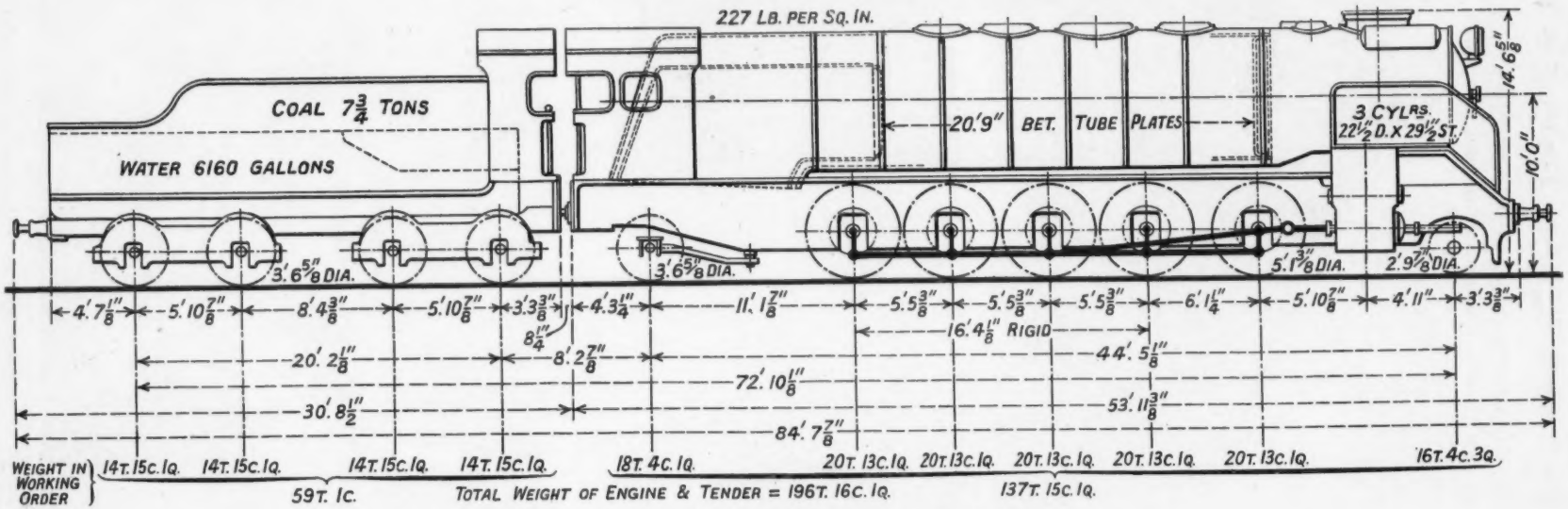

227 LB. PER SQ. IN.
COAL 7¾ TONS
WATER 6160 GALLONS
20'9" BET. TUBE PLATES
3 CYLRS. 22½" D. X 29½" ST.
5'9"
10'0"
3'6⅝" DIA.
3'6⅝" DIA.
5'1⅜" DIA.
2'9⅞" DIA.
4'7⅛" 5'10⅞" 8'4⅜" 5'10⅞" 3'3⅜" 4'3¼" 11'1⅞" 5'5⅜" 5'5⅜" 5'5⅜" 6'1¼" 5'10⅞" 4'11" 3'3⅜"
8¼"
16'4⅛" RIGID
20'2⅛" 8'2⅞" 44'5⅛"
72'10⅛"
30'8½" 53'11⅜"
84'7⅞"
WEIGHT IN WORKING ORDER
14T. 15C. 1Q. 14T. 15C. 1Q. 14T. 15C. 1Q. 14T. 15C. 1Q. 18T. 4C. 1Q. 20T. 13C. 1Q. 20T. 13C. 1Q. 20T. 13C. 1Q. 20T. 13C. 1Q. 20T. 13C. 1Q. 16T. 4C. 3Q.
59T. 1C.
TOTAL WEIGHT OF ENGINE & TENDER = 196T. 16C. 1Q.
137T. 15C. 1Q.

Diagram giving principal dimensions and axle loads

(*See article on previous page*)

RAILWAY NEWS SECTION

PERSONAL

A committee has been appointed by the Argentine Government to study the difficulties of British-owned railways in that country, and to discuss them with the directors (Mr. J. M. Eddy, Mr. H. C. Drayton, and Lord Forres) now in Buenos Aires. It is composed of the Director-General of Railways, Ministry of Public Works, Señor Arturo Noni; the General Manager of the Argentine State Railways, Señor Eduardo Huergo; and the Under-Secretary of the Ministry of Finance, Dr. Juan Carlos Sola. (*See editorial note, page 525*).

Mr. J. E. Papworth, who, as recorded in our November 19 issue, is retiring from the position of District Goods Manager, Leeds, L.M.S.R., entered L.N.W.R. service at Waterloo Dock Station, Liverpool, in 1897, and had experience of most of the Liverpool goods stations. He was transferred to the District Goods Manager's Office, Liverpool, in 1907. In 1916 he was appointed Agent at Waterloo Station and was transferred in the same capacity to Edge Hill in July, 1919. In October, 1921, he came to London as Goods Agent at Broad Street, and in October, 1922, was appointed Cartage Assistant to the District Goods Manager, Broad Street. In 1924 he became Cartage Assistant to the London District Goods Manager, L.M.S.R., and in October, 1925, was appointed Assistant District Goods Manager at Broad Street. Mr. Papworth was made District Goods Manager, Leeds, in February, 1930.

Mr. J. E. Papworth

District Goods Manager, Leeds, L.M.S.R., 1930-43

The late Mr. R. G. Woodward, who was a Director of Edgar Allen & Co. Ltd., left £22,984.

The Controller of Iron & Steel, Ministry of Supply, has accepted the resignation of Mr. Enos Smith, Director for Wire Rods, Wire & Wire Products. Mr. A. Scott and Mr. N. Anderson, of the same department, have been appointed Directors.

Mr. W. H. F. Mepsted, Divisional Superintendent, Southern Division, Southampton Central, Southern Railway, who, as recorded in our October 8 issue, has been appointed Assistant to Commercial Superintendent, entered the service of the former South Eastern & Chatham Railway in February, 1912, as a junior clerk in the Goods Department at Deal. After gaining further experience at Sandwich, he was transferred to the relief staff; and early in 1914 he joined the staff of the Eastern District Superintendent. He served in France and Belgium in the Railway Operating Division of the Royal Engineers from 1916 until he was demobilised in 1919 with the appointment of Company Quartermaster-Sergeant. After returning to the S.E.C.R. he gained further experience in all branches of the work of the Eastern District Superintendent's Office, and was deputed specially to take charge of the hop-pickers' traffic in the Paddock Wood area during the 1921 season. During the summers of 1922 and 1923 he was in charge of the Kent Coast Passenger-Traffic Control, with headquarters at Margate. He then served for a short period on the relief staff; with the grouping of the railways he was appointed to the position of Passenger Train Clerk in the then newly-formed Southern Divisional Superintendent's Office at Brighton in January, 1924. From October, 1924, until April, 1925, he was one of the staff specially selected to draw up the Central Section passenger timetable; on the completion of this work he was appointed Assistant Stationmaster, Victoria. He was senior Assistant Stationmaster there from 1928 until February, 1933, and during his period of service he saw the abolition of steam-hauled suburban trains, the introduction of the third-rail electric system, the conversion of some of the previously-electrified lines from the overhead to the third-rail system, and the extension of electrification to the Brighton main line. In February, 1933, he became Stationmaster at Charing Cross, and in November, 1936, Assistant London East Divisional Superintendent. During the Dunkirk evacuation he was in charge of operations in the Ashford-Folkestone-Dover area. Mr. Mepsted was appointed Divisional Superintendent, Southern Division, in January, 1942.

Mr. W. H. F. Mepsted

Appointed Assistant to Commercial Superintendent, Southern Railway

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Mr. D. S. Inman, M.Inst.T., District Goods & Passenger Manager, Leicester, L.M.S.R., who, as recorded in our November 19 issue, has been appointed District Goods Manager, Leeds, joined the former L.N.W.R. in the Passenger Department at Wilmslow in 1911. After over a year's training, there and in the District Superintendent's Office at Manchester, he served at various goods stations and in the District Goods Manager's Office in Liverpool, and went in February, 1914, to the Outdoor Goods Manager's Office at Manchester. From August, 1914, to May, 1919, he served in the Army, after December, 1914, with the B.E.F. in France, Flanders, and Italy, first with the 1st Cheshire Regiment, and subsequently on the staff of the 5th Division Headquarters. Mr. Inman returned to the Outdoor Goods Manager's Office, Manchester, in 1919, and remained there until the L.N.W.R.-L.Y.R. amalgamation in 1922, when he was transferred to the Outdoor Goods Manager's Office at Euston. On the formation of the L.M.S.R. in the next year, he joined the Goods Operating Manager's Office, Euston, and served in various sections until he was appointed Assistant District Goods Manager, Leicester, on January 1, 1928. In February, 1931, he was transferred to Liverpool in a similar capacity and, in November, 1933, was appointed Head of the Goods Revenue Section of the Chief Commercial Manager's Office at Euston. Mr. Inman became District Goods & Passenger Manager, Leicester, in June, 1935. He was appointed Justice of the Peace for the County of Leicester in 1938.

Mr. D. S. Inman

Appointed District Goods Manager, Leeds, L.M.S.R.

As a result of the development of electric operation in the areas of the Montreal terminals of the Canadian National Rail-

(See article on previous page)

ways, three offices have been established for the supervision of maintenance of electric locomotives, sub-stations, and overhead installations. Appointments have been made as follows: Mr. A. E. Coleman to be Assistant Superintendent of Motive Power; Mr. J. J. Miller to be Chief Electrical Supervisor; and Mr. H. W. Wreford to be Electrical Supervisor.

L.P.T.B. Staff Changes

The London Passenger Transport Board announces that Mr. H. J. Green, O.B.E., M.Inst.C.E., M.I.Mech.E., is relinquishing his position as Chief Engineer (Civil) on grounds of health, and that Mr. P. Croom-Johnson, M.Inst.C.E., Chief Stores Superintendent, succeeds him, as from November 22.

Mr. A. B. B. Valentine, Commercial Officer, has been promoted to take charge of the Stores & Supply Department, with the title of Chief Supplies Officer, as from the same date.

We regret to record the death on November 16 of Brigadier-General Sir William Horwood, G.B.E., K.C.B., D.S.O., who was Chief of Police of the former North Eastern Railway from April, 1911, until his resignation in February, 1919, when he became Chief Commissioner of Metropolitan Police, after serving in the Army throughout the war of 1914-19.

We regret to record the death on November 11 of Mr. Leonard F. Massey, Chairman & Joint Managing Director of B. & S. Massey Limited.

Among those nominated as sheriffs for England and Wales are Sir William Currie, a Director of the Southern Railway Company (Buckinghamshire); Mr. P. Ashley Cooper, a Member of the London Passenger Transport Board (Hertfordshire); Lt.-Colonel G. P. Pollitt, D.S.O., a Director of Imperial Chemical Industries Limited (Shropshire); and Mr. R. F. Summers, a Director of the London Midland & Scottish Railway Company (Flintshire).

Mr. H. Tandy, District Goods Manager, Bolton, L.M.S.R., who, as recorded in our November 19 issue, has been appointed District Goods & Passenger Manager, Leicester, entered the service of the former L.N.W.R. at Sandbach, and, after working in various positions, in 1920 was appointed Outdoor Assistant to the District Traffic Superintendent, Chester & Holyhead District. In 1925 he became Commercial Assistant in the Leeds District, and in 1927 Operating Assistant in the Manchester District. In 1929 he was appointed Assistant Irish Traffic Manager, and, in 1932, Goods Agent, St. Pancras & Somers Town. He became District Goods Manager, Bolton, in May, 1941. While in London, Mr. Tandy was Senior Company Commander of the 16th Battalion, City of London Home Guard, with rank of Major, and while in Bolton, Senior Company Commander of the 15th County of Lancaster Army Cadet Battalion. He was a member of the Council, Bolton Chamber of Commerce.

Mr. T. R. Heaton, Dock Superintendent, Holyhead, L.M.S.R., who, as recorded in our November 19 issue, has been appointed District Goods Manager, Wolverhampton, joined the former L.N.W.R. as a probationer in 1911, and obtained experience in the Goods and Traffic Departments in the London and Birmingham areas and elsewhere. He served with the Armed Forces from 1916 to 1919; in 1920 he became Assistant to Superintendent, Garston. In 1925 he was appointed Assistant to District Goods Manager, Leeds, and six years later was made Assistant District Goods Manager there. He became Assistant District Goods Manager, Birmingham, in 1938. Mr. Heaton was appointed Dock Superintendent, Holyhead, in 1942.

Mr. K. B. Turner, M.A., A.M.Inst.C.E., Acting District Engineer, Sheffield, L.N.E.R., who, as recorded in our November 12 issue, has been appointed District Engineer, Sheffield, was educated at Felsted School, and at Gonville & Caius College, Cambridge, where he took honours in the Engineering Tripos. After a period as pupil with the London General Omnibus Co. Ltd. at Chiswick Works, he joined the L.N.E.R. in 1923 as a pupil of the late Mr. John Miller, at the then

Elliott [*& Fry*

Mr. K. B. Turner
Appointed District Engineer, Sheffield, L.N.E.R.

head office at Liverpool Street. He was transferred in 1924 to the Norwich District Office, where he was engaged chiefly on the reconstruction of Beccles and St. Olaves swing bridges. In 1927 he was appointed as an assistant to the District Engineer at Cambridge, and while there was engaged largely on the heavy bridge-reconstruction and new-works programme in hand at that time. In 1937 Mr. Turner was transferred as a senior assistant in the Engineer's Head Office at Kings Cross, and a year later was appointed Assistant District Engineer, Kings Cross, which post he leaves to become District Engineer, Sheffield.

Institute of Transport

Among those elected recently to membership of the Institute of Transport are Messrs. M. A. Cameron, Acting Passenger Manager, Scottish Area, L.N.E.R.; and C. Furber, Mineral Traffic Manager & Development Agent, G.W.R. Those elected to associate membership include Messrs. E. C. R. Lidwell, Deputy Controller of Transportation, Ministry of Works; A. Paterson, Acting Assistant Goods Manager, Scottish Area, L.N.E.R.; C. Rayner, District Superintendent (Country Buses & Coaches), L.P.T.B.; and R. W. Wheeler, Southern Railway (prisoner-of-war).

Mr. G. E. Beharrell has been appointed Joint Managing Director of the Dunlop Rubber Co. Ltd., and Mr. H. L. Kenward has joined the board.

We regret to record the death on October 25 of Mr. George Arthur Gibson, formerly District Locomotive Superintendent, Great Indian Peninsula Railway, who retired in 1922.

Dr. C. J. T. Cronshaw and Mr. D. R. Lawson have been appointed Directors of Imperial Chemical Industries Limited. Dr. Cronshaw was formerly Chairman of I.C.I. (Dyestuffs) Limited, and Mr. Lawson was Chairman of I.C.I. (Alkali) Limited.

Mr. W. G. Hornett, M.I.Mech.E., has rejoined the Sentinel Waggon Works (1936) Limited. His designation is Railway Consultant to the company. For the present he will conduct all correspondence from 14, Devas Road, Wimbledon, London, S.W.20.

Mr. R. Holland-Martin, Chairman of the Southern Railway Company, has agreed to become President, and Mr. Ashton Davies, Vice-President of the L.M.S.R., has consented to act as Chairman of the Board of Management, of the Railway Benevolent Institution for 1944.

We regret to record the death on November 22, at the age of 71, of Mr. Francis Henry Willis, who was Secretary to the Southern Railway Company from 1930 until his retirement in 1936.

Indian Railway Staff Changes

Mr. H. N. Parker has been confirmed permanently as Chief Commercial Manager, B.A.R. On release from military duty, Mr. Parker has been appointed to officiate as Touring Officer, Railway Board.

Mr. J. N. E. Nagle has been confirmed permanently as Deputy Chief Commercial Manager, B.A.R. (not, as stated in our October 15 issue, Deputy Chief Transportation Manager).

Mr. R. G. Manson has been confirmed permanently as Deputy Chief Transportation Manager, B.A.R.

Rai Bahadur A. Bholanath has been confirmed provisionally as Deputy Chief Transportation Manager, B.A.R.

Mr. V. P. Bhandarkar has been confirmed provisionally as Deputy Chief Transportation Manager, B.A.R.

Mr. J. D. B. Osborn has been appointed to officiate as Deputy Chief Transportation Manager, Civil, B.A.R.

Mr. H. M. Read has been appointed to officiate as Deputy Chief Engineer, North, B.A.R.

Mr. L. F. Jackson has been appointed to officiate as Engineer-in-Chief, Construction, B.A.R.

Mr. T. McIntyre has been appointed to officiate as Deputy Chief Engineer, Bridges, B.A.R.

Dr. P. C. Datta has been confirmed provisionally as Chief Medical Officer, B.A.R.

Mr. G. C. K. Jolley has been appointed to officiate as Controller of Stores, B.B.C.I.R.

Mr. J. N. A. James has been appointed to officiate as Deputy Chief Traffic Manager, B.B.C.I.R.

Mr. K. Durai has been confirmed as Divisional Superintendent, E.I.R.

TRANSPORT SERVICES AND THE WAR—217

Civilian Air Raid Casualties in October

The Ministry of Home Security has announced the following figures of civilian casualties due to air raids in the United Kingdom during the month of October :—

Killed (or missing, believed killed)	118
Injured and detained in hospital	253

The casualties are classified as follow :—

	Men	Women	Under 16
Killed (or missing, believed killed)	53	48	17
Injured and detained in hospital	119	123	41

Earlier Trams in Glasgow

As from Sunday, November 7, morning workmen's tramcars in Glasgow have been scheduled to leave earlier, to allow extra running time during the blackout. This schedule will remain in operation until the end of February. The frequency of services in the evenings is being reduced slightly.

B.E.T. Producer-Gas Operation

The number of vehicle miles operated on producer gas by the bus companies in the British Electric Traction Group during September (the latest month for which complete figures are available) was 320,000, or 50,000 more than in August. This increase reflects the progress which is being made by the Group with the installation of producer-gas units under the Ministry of War Transport Scheme.

Passenger Services to Eire

Arrangements have been made for the passenger services to Eire to be augmented from December 1, by sailings on the Fishguard-Rosslare and Fishguard-Waterford routes. The Great Western Railway will not issue rail and steamer tickets to Eire unless the passenger (including children) is in possession of a sailing ticket which should be obtained from the Superintendent of the Line (Central Enquiry Bureau), Paddington Station. Application for sailing tickets (which will be issued free of charge) should be made at least ten days before the date of the proposed journey and must state clearly the proposed date of travel, together with an alternative date. Passengers are reminded that they must also be in possession of the necessary exit permit or leave certificate.

Baltic Region Goods Traffic

According to a recent announcement of the Reichsverkehrsdirektion Ostland at Riga, overloading of goods wagons is no longer permissible in the Eastern Regions (comprising Estonia, Latvia, Lithuania, and the Minsk area of Soviet Russia). Maximum loadings must adhere strictly to the weight indications on the sides of the wagons. The new provisions apply to Reichsbahn wagons as well as to foreign and privately-owned stock.

The issue of permits for the allocation of wagons to shippers was abolished in August, and wagons are now allocated freely for consignments to other parts of the Ostland, to Germany, Austria, and Bohemia—Moravia and to Poland (General-Gouvernement).

Italian Tanker Traffic

One of the last transport undertakings established in Italy under the old regime was C.I.A.L., or the Consorzio Italiano Autotrasporti Liquidi (Italian Consortium for the Motor Transport of Liquids) with headquarters in Rome. It was a combination of owners of road motor tankers, headed by the Corporation of Industrialists. The object of the consortium was described as being the organisation within one body of the motor transport of liquids, and the rationalisation of road tankers use. Services were to have been begun on June 13 last, and were to concentrate on the conveyance of mineral oil, liquid fuels, and similar commodities on behalf of the Italian State Railways. The transport of liquids by road tanker for private account was envisaged only after the needs of the Italian State Railways had been covered.

Jugoslav " Scorched Earth "

In the course of his recently-issued volume, " The Struggle of the Serbs," Mr. K. St. Pavlowitch quotes reports published in the *Deutsche Zeitung in Kroatien* for the statement that, when Jugoslavia was occupied, the Germans found that the railway lines had been destroyed, bridges and tunnels blown up, and telegraph and telephone wires cut. The Jugoslav Army had destroyed 700 miles of railway lines and blown up 68 bridges, of which 60 per cent. were more than 330 ft. long.

Budapest-Rome Express Cancelled

The fast train which provided the best connection between Budapest (Déli or Southern Station) and Rome, commonly known by its Hungarian passengers as the Rome Express, has not crossed the Hungarian border since the capitulation of Italy. It now stops at Csaktornya (Cakovec) in Hungarian-occupied Jugoslavia, 167 miles from Budapest and 5 miles from the present Hungaro-German frontier, where the last Hungarian station is Miksavar (Macinec) ; the official frontier station is Cakovec.

Pullman Club Cars in Hungary

Pullman club cars have now been reintroduced on certain main lines of the Hungarian State Railways. One service is operating on the line between Budapest (Keleti or Eastern Station) and Novi Sad (in Hungarian-occupied Jugoslavia), a distance of 174 miles. There are two fast trains daily in each direction ; the fastest takes 4 hr. 15 min. Another Pullman service is operating between Budapest (Keleti Station) and Košice (in Hungarian-occupied Czechoslovakia). There are three fast trains daily in each direction and it takes from 4 hr. 43 min. to 5 hr. to cover the distance of 170 miles. A third Pullman service is operating between Budapest (Keleti Station) and Sepsiszentgyörgy (sfantu Gheorghe), in the extreme south-east of Hungarian-occupied Transylvania, only a few miles to the north of Brashov in Roumania. There is one daily fast train each way between Budapest and this place and it takes 18 hr. to cover the distance of 498 miles ; the route is *via* Szolnok, Nagyvarad (Sutu Mare), Cluj (Kolozsvar) Dés, and Reghin (Szaszrégen). The use of the Pullman club cars is reserved for first- and second-class passengers. A supplement of 5 to 8 pengö (according to distance) is payable, plus 10 per cent. service. Seats must be reserved in advance, at a reservation fee of one pengö.

Third " Burma Road " Reported

There seems to be little doubt that a third " Burma Road " is and has been under construction for nearly twelve months. Reports upon it, coming from Delhi, vary considerably in detail, so that it is still impossible to trace the route it follows. The principal points in common between these reports are that the latest highway is being built under American supervision, runs from Assam through a part of Burma into China—largely traversing Japanese-occupied territory—and, when completed, will join the original Burma Road somewhere between Lashio and Chungking. So even the agreed points are somewhat vague, perhaps intentionally so. This vagueness is accentuated by the fact that one account states that Ledo, on the Dibru-Sadiya Railway, referred to in our issue of May 28 (page 543), is its starting point, whereas another message says that it begins in the Naga Hills, 150 miles south-west of Ledo. The length so far completed is said to be 800 to 900 miles, which also seems extraordinary, especially as 4,000 ft. is mentioned as a remarkable summit on the new road. If only 400 miles were completed this altitude would seem reasonable, but beyond that distance 8,000 or 9,000 ft. might be expected to recur frequently. Beyond the fact that a third road is in hand, therefore, there seems to be nothing very certain about it so far released for publication.

NO EXTRA TRAINS AT CHRISTMAS!
IF YOU GET LEFT
you'll have only yourself to blame!
Passenger accommodation is limited so avoid travelling at Christmas
RAILWAY EXECUTIVE COMMITTEE

The latest poster production of the Railway Executive Committee, warning intending passengers of the expected shortage of Christmas travel accommodation

Posen Trams

Posen (Poznan) has the fourth largest tramway system in Poland, exceeded only by Warsaw, Lodz (now called Litzmannstadt), and Lwow (Lemberg). Before the war it had a route length of 19 miles. Under German operation, tram traffic increased substantially in 1942, compared with the previous year, but bus traffic declined.

Railways and Roads in Persia

In view of the great importance of Persia as a line of communication between the British Empire and the U.S.A. on the one hand, and our Soviet Russian Allies on the other, information concerning improvements to its transport facilities is of considerable interest. The Persian Minister of Communications, on a recent visit to London, stated that the total length of classified roads in Persia is about 15,200 km. (9,450 miles). The Allies have repaired and improved about 6,000 km. (3,725 miles) of these roads, which they have been operating, and, of this 6,000 km., have constructed asphalt roads over 849 km. (527 miles). The general repair of the whole highway system of Persia, apart from the activities of the Allies, is undertaken by the Persian Government. Road construction in Persia is difficult because of the mountainous terrain. Tunnelling through the mountains, which is a long and costly process, has been avoided as far as possible. A few tunnels

have been built, however, of which the most ambitious is that on the Teheran-Naushah road, which is 1 km. long. Naushah is a port at the southern end of the Caspian Sea, to which it is proposed to extend the Trans-Persian Railway. The average width of main roads in Persia is 12 metres, and the ruling gradients vary between 1 in 25 and 1 in 14.

Little recent news is available concerning railway development in Persia apart from that undertaken by the Allied Forces on the main Trans-Persian Railway. It is understood, however, that work has been suspended on the branches to Meshed and Yazd. The latter is said to have reached Ardistan, and the earthworks to have been continued thence as far as Yazd.

Railway Sabotage in Denmark

For the past two months reports have been reaching this country from Stockholm of determined attacks by Danish Patriots on the railways of Jutland. The first of any great consequence said that saboteurs blew up the railway line from Aalborg to the German frontier on Sunday, September 26, in at least 20 places, and explosions also occurred on branch lines. The damage was stated by the Germans to be comparatively easy to repair, but it was added that, as the lines had been cut at so many points, traffic difficulties must arise all over Jutland. In one place guards are reported to have killed one saboteur and injured two others. The state of emergency was intensified in Jutland and all public places were required to close at 7 p.m. All road traffic was forbidden between 8 p.m. and 6 a.m.

On October 15 it was said that attacks by saboteurs on Jutland railways had become so audacious that the Germans had been compelled to withdraw the guards, after fighting in North Jutland between German guards and saboteurs, who cut the lines in about 14 places. Then, on November 18, further reports came to hand stating that, as a result of a demand by the German military authorities of 10,000 Danes for compulsory labour, a new wave of attacks against the railways of Jutland was launched. It is said that more than 100 delayed-action bombs were discovered by German sappers when they inspected the wrecked railway bridge at Langaa, between Aarhus and Randers. German experts are reported to have admitted that the bridge was so extensively damaged by Danish saboteurs that it will be unusable for a considerable time. Patriots have wrecked two other bridges in the neighbourhood of Langaa, and all German traffic between Aarhus, Langaa, and Silkeborg was disrupted.

Belgian Railwaymen's Health

A striking report of increased illness, arising from food privations, among Belgian railwaymen is given in a report that has just been received from a doctor in Belgium. He states that, whereas during the whole of 1939, there were 118 fresh tubercular cases reported, no fewer than 68 new cases arose in the second quarter of 1943. The increase in pre-tubercular cases has been alarming, and with the continuation of present conditions many will develop into established cases. In the second quarter of 1943, there were 244 patients suffering from gastric and duodenal ulcers, against 249 for the whole of 1939. Of the many instances of rupture, the figure of those cases who have been operated on are 72 during 1939 against 144 for the second quarter of 1942. Many patients have refused to be operated, waiting for better times, when more substantial food will be available. The gradual weakening of physical resistance makes the smallest ailment impossible to throw off, and wounds fester and take months to heal. Despite the mildness of last winter, there has been a marked increase in illness. There followed an extremely cold and wet season which lasted right up to the beginning of August. In some districts the quality of bread—which is already insufficient—was so distasteful that men prematurely dug up their potatoes and young vegetables which were their own food supply. With the summer heat of August, they seized the unripe fruit, to stave off hunger, and are consequently suffering from acute inflammation of the intestines. Medical centres have become alarmed by the sudden rise in illness and it has been found necessary to double the petrol allowances of all medical inspectors. It is difficult to see how any measures taken will be adequate while the official standard of rations is so markedly below the standard of requisite calories. Resistance to illness will become weaker, and the output of work will be lower.

Japanese Construction in Netherlands India

A highway is to be built across the Equator to connect the northern and southern portions of Celebes, according to a Japanese radio announcement. The first section will link Mangkoeana, on the Gulf of Boni, with Majoa, near Lake Posso on the Gulf of Gorontalo. Work on the construction of the overland railway of Celebes Island is also reported to be progressing.

New El Alamein Station as War Memorial?

A suggestion has been made in *The Egyptian Mail* that a new El Alamein Station should be designed as "A memorial to those who died in the greatest desert battle of all time." Readers have welcomed the idea, but some prefer a granite obelisk as more in keeping with the tradition of Egypt than a "ferro-concrete horror." A view of the present modest wayside station was published in our issue of February 5 last, page 141.

Inter-American Transport

The Institute of Inter-American Transportation has been established as an operating agency of the Office of the Co-ordinator of Inter-American Affairs (U.S.A.) to serve as a medium of co-operation with the other American republics in transport matters. The President is Major-General Julian L. Schley, former Chief of Engineers of the U.S. Army and Governor of the Panama Canal Zone. The principal immediate task of the institute is to co-operate with Mexico in the rehabilitation of the Mexican key railways, to facilitate the movement of strategic materials. Details of the agreement between the U.S.A. and Mexico to this end have already been given in these columns. Both this work, and also that of highway development to the Guatemalan border, are stressed by the U.S.A. as of great importance in providing improved overland communications into Central America.

It is therefore surprising that a report has gained currency in responsible American circles (but lacks official confirmation) that the U.S.A. Corps of Engineers has ceased work in Costa Rica on 252 miles of the Inter-American Highway, and was withdrawn entirely from Central America on October 30. This might be interpreted to mean that the 1,569-mile Inter-American Highway is no longer regarded as a war emergency project. Construction by the Public Roads Administration would presumably be continued under its 5-year programme; its present work includes about 20 permanent bridges in Costa Rica, Nicaragua, Honduras, and Salvador, and a difficult 71-mile section of road in southern Costa Rica which climbs to 10,900 ft. and is not scheduled for completion until 1945

The First U.S.A. Railway Bomber

To the Union Pacific Railroad in the United States goes the honour of being the first railway to be "credited" with its own named bomber plane as a recognition of a voluntary increase in payroll deductions for the purchase of war bonds by no less than $379,270 during May and June last; the grand total for the two months, including this increase, was $1,764,206, subscribed by 59,158 employees. The plane, a Boeing Flying Fortress, has been named *Spirit of the Union Pacific*.

U.S.A. Rubber Director Returns to Railway

Mr. William M. Jeffers, President of the Union Pacific Railroad, who has served since September 15, 1942, as Rubber Director for the War Production Board of the United States, has resigned this appointment in order to return to the railway. The task set by the Baruch Report, of establishing a synthetic rubber production in the United States which would compensate for the loss of natural rubber from the East Indies, is now so far forward that the plants contemplated are now either complete, or all the material for their completion is in hand. Mr. Jeffers, who is regarded as having carried through to success "one of the toughest assignments" of the American war programme, has received a letter from President Roosevelt accepting his resignation, in which the President says, "You have performed a real public service and you have my sincere appreciation."

Pullman Sleepers for U.S.A. Troops

The first of the 1,200 sleeping cars ordered for the use of American troops has recently been completed by the Pullman-Standard Car Manufacturing Company for the Defense Plant Corporation. It is a somewhat curious-looking vehicle with straight steel-panelled sides of considerable height, in which the ten sliding windows (about 2 ft. 6 in. wide by 3 ft. high) are set low down, and end gangways are provided, but no end vestibules, as each car is entered through central sliding doors on each side. The car is of all-steel construction, with heavily reinforced ends, and is fully interchangeable with standard stock.

Each car is fitted with ten tiers of three berths each, set at right angles to the length of the car (instead of the longitudinal berths of normal American sleeping car practice), and with an open gangway along one side. The upper berth is fixed. Below it is a seat wide enough to take three, which forms the lower berth at night; the back is raised to form the middle berth. Every berth has a steel bed spring and a mattress; the latter for the lower berth forms the cushion for the seat for daytime use. Standard Pullman bedding (sheets, pillows, pillow cases, and blankets) is furnished. Four washbasins, with hot and cold supply, two at each end of the car, are provided, and there are two lavatories, one at each end.

The cars, each of which carries 30 passengers, will be operated and maintained by the Pullman Company, and the Defense Plant Corporation will receive mileage payments for the use of the cars from both Pullman and the railways. A tariff has been prepared under which the War Department will pay approximately the ordinary coach rate for troops moved in these cars. After the war it seems probable that this large pool of cars may be used to provide inexpensive sleeping accommodation for coach passengers.

Japanese Transport South of China

From stories which have come to hand from a variety of sources, and, to some extent, from official announcements of the Tokio radio, it is now possible to piece together something of the activities of the Japanese in developing the transport facilities of the occupied territories south of China, comprising Burma, Siam, Indo-China, and Malaya. Burma itself was declared an independent State from August 1 last and, as already reported in our columns, the Burma State Railways (British) have been "presented" by the Japanese to the puppet government. On the other hand, two of the Shan states have been handed over to Siam as a reward for her "co-operation." Siam itself remains nominally independent, but is subject to Japanese guidance and technical direction. It appears that, broadly, the Japanese efforts towards improving transport communications in these regions have taken the form of completing the link between Bangkok and Phnom Penh, by finishing the uncompleted section of railway between Aranya Pradhesa and Mongkolborey, both in the part of Cambodia ceded by French Indo-China to Siam in March, 1941; by constructing a connecting line between the railways of Burma and those of Siam; and by building important east-to-west and north-to-south (East Coast) roads in Malaya.

The link in Cambodia, as shown on the accompanying map, joins the metre-gauge Royal State Railways of Siam with what was formerly an isolated railway extending from Phnom Penh (the capital of Cambodia) to Mongkolborey. This important metre-gauge line was built by a private company, and opened for traffic in 1933; it was purchased by the Indo-China State Railways on January 1, 1936.

So far as is known, the Japanese authorities have taken no further steps towards railway construction in Indo-China.

Siam-Burma Railway

Messages from Chungking state that the Japanese are building a new railway from Petchaburi, a station about 70 miles south-west of Bangkok on the Bangkok-Singapore main line, but other reports give the junction point as Ban Pong. The eventual northern terminus of this new railway is stated in some reports to be Ye, the southernmost railhead of the Burma Railways system, some 200 miles as the crow flies from Petchaburi. Slightly earlier American reports, however, indicate a junction with the Burma Railways at a point just south of Moulmein. About 60 to 70 miles of line are reported to have been completed so far, and 20,000 British and Allied prisoners of war are said to be employed on this work. The messages from Chungking are based on statements dated September 13 and 14, and are of an escaped prisoner of war and are, therefore, probably reliable.

The route followed is, however, not at all clear, as the line is mentioned in some accounts as running north-westwards from Petchaburi and in others as following the coast. The latter phrase, however, may mean roughly parallel with the coast. The normal route this railway might be expected to take is from Ban Pong, on the existing railway, up the Mei Klong or Taiphaket River to the Three Pagodas Pass, and thence westwards down the Ye River drainage to Ye. As some reports say that the new line begins at Petchaburi, however, it may follow the Phayt-Chaburi valley and cross the "Pennine" ridge into the Tennasserim River valley, and reach the coast with a detour southwards at the important port of Mergui. The coast could then be followed along the alignment through Tavoy to Ye, surveyed some years ago by British engineers.

Japan gives Malayan and Shan Territory to Siam

Meanwhile, Siam has been rewarded for her assistance to the Japanese by their handing over to her the four northern Malay States of Perlis, Kedah, Kelantan, and Trenggannu, and the two easternmost Shan States of Kengtung and Mong Pan. The escaped prisoner of war mentioned above has also stated that the Japanese were constructing a highway to connect the Shan States with Hanoi in Tongking. There is already a motor road from Keng Tung through Taunggyi, the capital of the Southern Shan States, to Heho, the present terminus of the Southern Shan States branch of the Burma Railways, and also parallel to the railway thence to Thazi junction on the Rangoon-Mandalay road and main-line railway. So the new road will connect the whole of Burma with the China Sea at Haiphong near Hanoi; the distance as the crow flies is about 650 miles from Thazi Junction to Haiphong.

The four northern Malay States, which were all Unfederated States, belonged to Siam until 1909, when they were ceded to the British Empire, under a Treaty of March 10 of that year. They have an aggregate area of 14,770 sq. miles and a population of a little over 1,000,000.

Sketch map of the peninsula south of China, comprising eastern Burma, Siam, part of French Indo-China, and Malaya, in which the Japanese occupation authorities are reported to be developing both rail and road transport facilities

Kengtung and Mong Pan States cover 15,388 sq. miles, but their population is only about a quarter of a million; neither has any railways. With Perlis and Kedah, the Padang Besar to Jarak section of the Federated Malay States Railways western main line is, presumably, now under Siamese control. Similarly, on the eastern main line, the Sungei Golok to Merapoh section, and the Tumpat-Pasir Mas branch, now traverse Siamese-controlled territory. There are no railways in Trenggannu.

JAPANESE ROAD-BUILDING IN MALAYA

Hitherto there has been only one transverse highway across the Malay peninsula from east to west, from Kuantan (on the east coast), through Jerantut (on the eastern main line of the F.M.S.R.), to Benta (near Kuala Lipis), and onwards to Kuala Kubu (on the western main line), and K. Selangor. This road was shown in the map we published in our issue of January 30, 1942 (page 174).

Now, however, under Japanese auspices, a second east-west highway is being constructed from Kota Bharu (on the east coast, and also on the eastern main line) to Taiping (on the western main line and in the State of Perak). About 1,000 men are reported to be employed on this work.

In extension northwards of the metalled road from Singapore to Endau, in northern Johore, the series of unmetalled roads and trails connecting villages up the east coast is also being converted into a continuous highway to connect Singapore with Kota Bharu, a distance of about 400 miles.

All these roads will open up country of which the local traffic is untapped by any railway, and will doubtless be of strategic value to the Japanese.

New "Santa Fe" Type Locomotives for Spain

(*Continued from page* 537)

lighting on the Stone system. Apart from the lighting equipment, the speed recorder, and the roller bearings, all the accessories have been constructed in Spain.

Before being put in service the locomotive was given various trials on routes involving heavy gradients. All trials gave excellent results with the speeds considerably exceeding those which had been estimated. The preliminary trials took place between Madrid and Barcelona and between Madrid and Avila. Official trials were carried out on the line from Madrid to La Coruña. The Madrid to Barcelona trials were on the 24·8 km. (15·3 miles) section between Mora and Pradell with a gradient of 1·5 per cent., up which was pulled a train of 692 English tons in 51 min., that is, with a speed of 29 km.p.h. (18 m.p.h.). On another occasion the train weight was 562 tons and the time 30 min., corresponding to an average speed of 49·5 km.p.h. (30·7 m.p.h.). On the Avila line, in the 22·7 km. (14 miles) stretch beyond Avila, which has a gradient varying between 1·5 and 2 per cent., a goods train of 691 tons was pulled, and the time for the above stretch was 31 min., corresponding to an average speed of 44 km.p.h. (27·2 m.p.h.). Finally, in the official trials that took place on the La Coruña line in the 21·7 km. (13·5 miles) stretch between Torre and Brañuelas, with gradients of 1·8 to 2 per cent., a train of 394 tons performed the journey in 30·5 min., equal to an average speed of 42·7 km.p.h. (26·6 m.p.h.), and another train of 492 tons took 37·5 min., equal to an average speed of 34·5 km.p.h. (21·4 m.p.h.).

Trade Associations

(*From a correspondent*)

In the planned political agitation against private enterprise and in favour of the nationalisation of industry or its embodiment in a system of public corporations, one of the predominant features is the attack on cartels, monopolies, and trade associations. The main charge against cartels is that they are deliberately restrictive and therefore a cause of unemployment: against monopolies that they are a general danger to the State and the consumer through the concentration of absolute power in the hands of individuals not directly controlled by the State: against trade associations that they are "rings" which inflate prices to cover the costs of the less efficient producer in order to maintain his profit level.

It would be unwise to close one's eyes to the fact that an adverse attitude is being created in the public mind against the cartel-monopoly-trade association bogey, with the trade association branded as the root of the menace. The political party predominant after the War—whether Socialist or Conservative or a coalition—may seek or be driven to placate public opinion by attempting to institute more drastic changes in the structure of British industry than may be justified. Such changes may include the imposition of serious limitations on the activities of the *bona fide* trade association, and on the freedom and independence of the individual concerns functioning legitimately within the association.

In attacking the trade association, the Socialists have employed the technique of establishing a "talking point." Merely to talk back, whatever the strength of the counter-arguments, is to create at once a public controversy which serves no useful purpose except to provide more publicity for the detractors. The first step, it is suggested, is for each association to examine the present structure of the industry with which it is concerned, and to ascertain what, if anything, is being left undone which might make that industry vulnerable to the avowed policy of the Labour Party, if the latter were ever in a position to carry out its aims. So far as industry generally is concerned, that policy was stated in broad terms in the report of the National Executive Committee of the Labour Party which was laid before the Annual Whitsuntide Conference earlier this year:—

1. The adjustment of industry to the needs of peace, the adoption of a policy of economic expansion at home, and the organisation of our export trade, will all call for wide measures of central regulation and control.

2. The governing principle should be this: industry to be the instrument of public policy—not public policy the instrument of industry. Production should be governed by the real needs of the community, rather than by the inducements of private profit-making.

3. The Labour Party looks forward to early measures for securing public control and ownership of certain industries; namely, monopolies by nature of historic growth, and industries which, because they render services necessary for the general public, must in the public interest be managed efficiently, though on principles sometimes far removed from those of conventional commercial practice.

4. In other industries the degree of control must be proportionate both in their need of State help in financial guarantees or other forms and to the importance of the part they play in the wider pattern of public policy at home and abroad. Wherever public interest is powerfully affected, there it should be powerfully protected.

5. An increasing part in our trade organisation is being and should be played by the Consumers' Co-operative Movement. Co-operation renders great service to millions of the people in the distributive sphere and its principles are capable of increasing application in the field of agriculture.

6. Industry in many fields will seek the help of the State to finance and organise itself. There must be no such help without supervision and control to the full extent that the public interest requires. The great sustaining power of the State must not be turned into a prop for irresponsibly conducted private business. Specious cries for self-government in industry mean in practice the right of the private owners of industry to go their own way, often with the help of the State, and without any safeguard for the public interest. Down that road lies national decline and decadence, as the years before the war gave alarming evidence. On behalf of the whole community, Labour will challenge any such tendency and resist it as the inevitable forerunner of exploitation, economic Fascism, and national decline.

7. Agriculture, too—as agriculturists well know—must be organised with the help of the State. It must play a greater part than ever before in the achievement of a national food and nutrition policy. For this purpose it will need help; but equally public interest will require, and the Labour Party will demand, stringent guarantees of an increasing efficiency in production, the maintenance of fair wages to farm workers, and reasonable—and no more than reasonable—levels of return to farmers and—while private ownership still exists—the landlords.

8. All industries must be subject to such public supervision as will provide guarantees against anti-social restrictive practices or artificial price levels, and ensure the maintenance of proper standards of welfare for all those engaged in them.

9. The State should conduct that most powerful and potentially most dangerous of all monopolies, central banking. The Bank of England should be a State concern, and the State's relations with the commercial banks should take on a more integrated form.

10. On the basis of such a relationship between the State, finance, and industry there must be a determination to maintain full employment as a permanent feature of public policy. Care and method in the handling of public finances is an essential of good administration, but the Labour Party proclaims its conviction that it is possible to use wise and enlightened financial policies in such a way as to keep the whole nation busily engaged in gaining its livelihood; and that it is absolutely essential that budget and investment policy be conducted to this end.

Clearly, if one is to accept the power potential of the Labour Party, there are points in this manifesto which merit serious attention.

Section 1 should stimulate every industry to make its plans now for its adjustment to peace conditions.

Section 2 is a pointer to the necessity for giving the maximum service to the consumer.

Section 3 is a warning—and a justifiable one—that monopolistic tendencies should be suspect.

Section 4 illustrates the logical consequence of financial indebtedness to a Government—or to anyone else.

(*Sections* 5, 6, 7 *and* 9—the bouquet to the co-operative movement, the attack on private enterprise, the angling for the farmers' vote, and the demand for the nationalisation of Central Banking—are pure politics).

Section 8 calls for an examination of price structure and workers' welfare conditions.

Section 10 reinforces the proposition that the maintenance of full employment after the war must be a prime consideration.

Thus, divested of the political trimmings of State control, the main principles of the Labour Party's economic policy are those which should be included in the programme of industries with ambitions to play a full part in post-war reconstruction.

Staff and Labour Matters

Machinery of Negotiation for Railway Staff

A decision by the Chairman of the Railway Staff National Tribunal has been published recently on an issue concerning the eligibility of an item for admission to the agenda of the Railway Staff National Council. The Railway Clerks' Association submitted a claim to the Railway Staff National Council that the national agreements for Stationmasters, Supervisors, etc., should be altered to provide that men should be eligible for promotion to the higher classes as vacancies occur, or as vacancies would occur but for the retention of men in the service beyond the average pre-war retiring age, subject to merit and satisfactory conduct. The parties could not agree on the eligibility of this claim for consideration by the Railway Staff National Council, and the matter was referred to the Chairman of the Railway Staff National Tribunal to decide the issue as a question of interpretation of the scheme of machinery of negotiation for railway staff.

The claim arose out of an arrangement introduced by the railways under which it was agreed that, as a wartime measure, staff who would have been promoted, but for the retention of other staff in the service beyond 65 years of age, should be paid at the rate of the post to which otherwise they would have been promoted subject to the individuals concerned being prepared to undertake the higher responsibilities as soon as they were called on to do so.

In the submission to the Chairman of the tribunal it was contended by the R.C.A. that the national agreements referred to in its claim provided that members of the staff "will be eligible for promotion to the higher classes as vacancies occur, subject to merit and satisfactory conduct," and that the arrangement introduced by the railways varied the provisions of the national agreements in the case of staff who would have been promoted but for the retention of other staff beyond 65 years of age; that whereas the purpose of that arrangement was to alleviate the stagnation in promotion caused by the retention of staff beyond 65 years of age, the purpose of the Association was to alleviate such stagnation to a greater degree by basing the compensatory promotions on the average pre-war retiring age; that the Association's claim did not involve the question of the age at which staff should retire or when and in what circumstances promotion should take place, and on such grounds could not therefore be considered as outside the scope of the national agreements; that as the claim did not affect the question of the classification of positions or the right of the management to decide who should receive promotions no question of management was involved; that the claim was a national one and was correctly initiated in accordance with the provisions of the machinery of negotiation for railway staff.

It was contended by the railway companies that the Association's claim was not eligible for consideration by the Railway Staff National Council because the amendment proposed could have no operative effect without involving questions which did not fall within the scope of the national agreements; that the claim involved questions of management and accordingly did not fall to be dealt with as part of the machinery for negotiation for railway staff; that the claim was an application to vary the conditions under which the salaries attaching to the higher classes set out in the national agreements should be paid and therefore went beyond the question as to when and in what circumstances staff should be eligible for promotion; that the companies did not admit the right of the Association to pursue the claim through any stages of the agreed machinery.

In his decision the Chairman stated that the national agreements covering the various sections of staff in respect of which the present issue was raised, although they fix salaries and other conditions of service, were silent as to the age for retirement or the age at which staff should be deemed to have retired. The age at which a member of the staff should retire hitherto had been a matter solely within the discretion of the railway managements, as also had been the question whether a vacancy caused by retirement should be filled. The scheme of machinery of negotiation for railway staff provided that questions of discipline and management should be excluded from discussions or negotiations through the machinery. If the contention of the Railway Clerks' Association was accepted the companies would be compelled to accept as eligible for consideration under the machinery of negotiation for railway staff a managerial question, namely, the establishment on a fixed and arbitrary basis of the age at which Stationmasters, and other staff concerned, should be deemed, for promotion purposes, to have retired from the service of the companies.

It was suggested by the Association that the advice received by it of the arrangement introduced by the companies, as a wartime measure, that staff who would have been promoted but for the retention of other staff in the service beyond 65 years of age, should be paid at the rate of the post to which they would otherwise have been promoted, must be written into and form part of the national agreements.

The Chairman stated that he could not accept the latter contention, for in his view that advice constituted no more than an intimation as to the manner in which the companies intend to exercise, during the war, discretion in relation to a matter in which discretion rests solely with them. He therefore found against the claim.

Catering Wages—Industrial Canteens

The Catering Wages Commission, which was set up under the Catering Wages Act, has given consideration to the arrangements for regulating the remuneration and conditions of employment for canteen workers and, on November 9, it was announced that the commission proposes to recommend the setting up of a wages board for workers employed in industrial and staff canteens in Great Britain. The workers to whom the recommendation applies are workers employed in Great Britain in any industrial or staff canteen who are employed by the person or body carrying on the canteen and are engaged :—

(*a*) on the preparation of food or drink for consumption at the canteen ;

(*b*) on the service of food or drink at the canteen ;

(*c*) on work incidental to such preparation or service ;

(*d*) on any other work in connection with the canteen which is performed on or about the canteen premises ; including work in connection with any service or amenity provided at the canteen ;

(*e*) wholly or mainly on transport work which is performed in connection with the activities carried on at the canteen or, where the employer carries on more than one canteen, at such canteens ;

(*f*) wholly or mainly on work performed at any office, depot, store or similar place if the work is directly related to the activities carried on at the canteen, or, where the employer carries on more than one canteen, at such canteens.

Below is the definition of industrial and staff canteens :—

Industrial and staff canteens consist of undertakings wholly or mainly engaged in supplying food and drink or food or drink for immediate consumption which are carried on for the use of workers :—

(*a*) by the employer of the workers ;

(*b*) by the workers themselves ;

(*c*) by the workers and their employer jointly ;

(*d*) by a catering contractor or other body or person in pursuance of an arrangement with the employer of the workers or with the workers or with the workers and their employer jointly ;

but excluding any such undertaking carried on :—

(*a*) directly by the Crown or by a Local Authority ;

(*b*) by an employer or by workers and their employer jointly, if the main business of the employer consists of the provision of food and drink or food or drink for immediate consumption otherwise than in connection with industrial or staff canteens as described above ;

(*c*) by an employer or by workers and their employer jointly, at or in conjunction with a shop if provision also is made for the supply of meals to customers at that shop ;

(*d*) by an employer or by workers and their employer jointly, at or in connection with a hotel, boarding house, hostel, or other similar establishment.

Before presenting its recommendation to the Minister, the commission must provide an opportunity for representations to be made by interested persons. The final date for the receipt of representations at the Commission's Office, 1, Bryanston Square, W.1, is December 6. After receiving the recommendation the Minister is authorised to set up a wages board by order. All the members will be appointed by the Minister. Three, including the Chairman, will be independent persons, and the employers and the workers will be represented equally.

PORTABLE CHEMICAL FIRE EXTINGUISHERS.—The British Standards Institution has published a war-emergency amendment to B.S. 138—1935 (portable chemical fire extinguishers). Copies (P.D. 157, Amendment No. 1, September, 1943) may be obtained free from the Institution, Publications Department, 28, Victoria Street, London, S.W.1.

CONTROL OF COPPER, LEAD, AND ZINC.—The Minister of Supply has made the Control of Non-Ferrous Metals (No. 13) (Copper, Lead & Zinc) Order, 1943 (S.R. & O., 1943, No. 1592), which increases the maximum price of black hot-rolled copper wire-rods from £65 10s. to £65 15s. a ton, delivered buyer's premises, on account of increased delivery costs. Copies may be obtained from H.M. Stationery Office, Kingsway, W.C.2, or through any bookseller, price 2d. Inquiries should be addressed to the Non-Ferrous Metals Control, Grand Hotel, Rugby.

Notes and News

Guest, Keen & Nettlefolds Limited. Payment is announced of an interim dividend of 4 per cent., less tax (same).

Railway Assistant Accountant Required.—An assistant accountant is required by the Nigerian Railway for two tours each of 12 to 24 months, with possibility of permanency. Details are given in our Official Notices, page 547.

Concrete Sleepers on the G.W.R.—Half-a-million reinforced-concrete blocks have been manufactured by the Great Western Railway during the past three-and-a-half years, to replace wooden sleepers, which are being used for other purposes.

International Railways of Central America.—September net revenue of the International Railways of Central America amounted to $147,404, compared with $84,983 for September, 1942. Aggregate net earnings from January 1 total $2,546,119, against $2,160,903. Interest due November 1 on the 5 per cent. first mortgage bonds is being paid.

Public Transport Association.—The membership of the Public Transport Association on November 15 totalled 373, representing a fleet of more than 39,700 road passenger vehicles. The total comprises 104 companies, 23 municipalities, 137 contractors, 101 associates, 2 extraordinary (London Transport and the Northern Ireland Board), and 6 overseas.

Low-Grade Fuels for Steam Raising.—At a meeting of the Institute of Fuel, to be held at the James Watt Memorial Institute, Great Charles Street, Birmingham, at 2.30 p.m. on December 15, Mr. J. Stanley Jones, of the United Westminster & Wrexham Collieries, will give a paper on "Some Observations on the Use of Low-Grade Fuels for Steam Raising."

Health in Industry.—To encourage its employees to look after their health and take advantage of treatment facilities provided, the Chloride Electrical Storage Co. Ltd. lately arranged a health exhibition at its works near Manchester. This was attended by some 60 per cent. of the works personnel in their own time, and it has proved of great benefit. Recently, the exhibition was transferred for a brief period to London; this was made possible by Harris & Sheldon Limited, which designed and built the exhibition, and which placed its showrooms at the disposal of the Chloride Electrical Storage Co. Ltd. Continuity of lighting over the demonstration operating-table was maintained by Keepalite emergency lighting-equipment; this automatically changes over from mains to battery in the event of a supply failure, and has many applications outside hospital use.

South African Railways Earnings.—For the period October 10 to November 6, 1943, earnings of the South African Railways amounted to £3,350,226, an increase of £138,792 compared with the corresponding period in 1942.

Light Alloys in Post-War Britain.—At an ordinary meeting of the Royal Society of Arts, to be held at 1.45 p.m. on February 2 next, Mr. E. C. Goldsworthy, Development Officer, High Duty Alloys Limited, will speak on "Light Alloys in Post-War Britain." Mr. Horace W. Clarke, Managing Director, James Booth & Co. Ltd., will take the chair.

Stothert & Pitt Limited.—Earnings for the year to June 30, 1943, amounted to £170,371 (£186,117). After deducting £118,590 (£142,172) for income tax and E.P.T. and providing for war risks insurance and other special war expenses, there was a profit of £44,461 (£38,823), and £24,079 was brought in, making £68,540. The dividend on the ordinary shares for the year is again 10 per cent., less tax, and the bonus of 2½ per cent., less tax, is repeated. Reserve again gets £20,000, and the amount carried forward is £30,920.

Murex Limited.—In the course of his address at the 24th ordinary general meeting, Mr. George P. Joseph, the Chairman, said that it was inevitable that developments arising out of war-time operations would necessitate considerable reconstruction work at the company's factories in the post-war years, together with the need for the provision of up-to-date and efficient machinery and equipment. Taxation and substantial additions to buildings and plant during the war period had proved a heavy drain on cash resources. It was essential, therefore, to continue to strengthen the reserve position and cash resources as far as the present limited circumstances permitted. Research activities at the factories were being pursued with vigour and enthusiasm. Murex Welding Processes Limited, the wholly owned subsidiary, had shown further considerable expansion and continued to maintain its strong position in the electric arc welding industry. He felt confident that its application in all branches of post-war industry would show a marked expansion over the pre-war era.

Dover, St. Margarets & Martin Mill Light Railways.—The Minister of War Transport has made the Dover, St. Margarets & Martin Mill Light Railways (Extension of Time) Order, 1943 (S.R. & O. 1943, No. 1543) extending by three years the time limited by Section 28 of the Dover, St. Margarets & Martin Mill Light Railways Order, 1909, and subsequently

A view of the health exhibition recently arranged by the Chloride Electrical Storage Co. Ltd. for the benefit of its employees (see accompanying paragraph)

British and Irish Railway Stocks and Shares

Stocks	Highest 1942	Lowest 1942	Prices Nov. 19, 1943	Prices Rise/Fall
G.W.R.				
Cons. Ord.	58	39	62½	+ 1
5% Con. Pref. ...	115½	105½	115	+ 1
5% Red. Pref. (1950)	109½	103½	107	—
5% Rt. Charge ...	133¾	123¾	127½	—
5% Cons. Guar. ...	130¾	121½	125½	—
4% Deb.	117	105	113	—
4½% Deb.	118	108	113½	—
4½% Deb.	125	113	118½	+ 1
5% Deb.	137	127	129	—
2½% Deb.	77	70	74½	—
L.M.S.R.				
Ord.	28½	16⅜	33½	+ 1¼
4% Pref. (1923) ...	63½	50½	62½	—
4% Pref.	76⅝	67½	76	—
5% Red. Pref. (1955)	103⅜	94⅜	103½	— ½
4% Guar.	104⅜	97½	100	—
4% Deb.	108¾	101½	105½	—
5% Red. Deb. (1952)	111	107½	109½	—
L.N.E.R.				
5% Pref. Ord. ...	9¾	2⅞	10½	+ ⅛
Def. Ord.	5	1⅛	4⅛	+ ⅛
4% First Pref. ...	62	49½	61½	—
4% Second Pref. ...	32⅝	18½	33½	+ ⅛
5% Red. Pref. (1955)	95½	79	98½	—
4% First Guar. ...	98	88	96	—
4% Second Guar. ...	90	78	85	—
3% Deb.	85	76	82	—
4% Deb.	106⅜	100½	104½	—
5% Red. Deb. (1947)	106	103	103	—
4½% Sinking Fund Red. Deb. ...	106	102½	105½	—
SOUTHERN				
Pref. Ord.	77	61½	78½	—
Def. Ord.	23½	14⅜	24⅜	+ ⅜
5% Pref.	112⅜	104	114	+ 1
5% Red. Pref. (1964)	110⅛	105½	112½	—
5% Guar. Pref. ...	131	121½	125½	+ 2
5% Red. Guar. Pref. (1957)	115½	109½	112½	—
4% Deb.	116	104½	110½	—
5% Deb.	134	125½	128	—
4% Red Deb. (1962–67)	110⅜	106	107½	—
4% Red. Deb. (1970–80)	111	106½	108½	—
FORTH BRIDGE				
4% Deb.	109 7/16	108	106	—
4% Guar.	105½	100	10?½	—
L.P.T.B.				
4½% "A"	122½	111	116½	—
5% "A"	131½	122	125½	—
3% Guar. (1967–72)	95⅜	97½	98½	—
5% "B"	121	111½	116½	—
"C"	56½	38	68	—
MERSEY				
Ord.	27½	20½	32	—
3% Perp. Pref. ...	61½	56½	65	—
4% Perp. Deb. ...	102⅜	99¾	103	—
3% Perp. Deb. ...	80½	76	79	—
IRELAND				
BELFAST & C.D.				
Ord.	9	4	6¾	—
G. NORTHERN				
Ord.	29¾	12½	21	+ ½
Pref.	—	—	42½	+ ½
Guar.	—	—	60½	+ ½
Deb.	—	—	81½	—
G. SOUTHERN				
Ord.	25	10	25½	—
Pref.	29	12¾	26	— ¼
Guar.	53	35¾	57½	— ¾
Deb.	71½	55¼	83⅜	— 1⅛

§ ex-dividend

OFFICIAL NOTICES

Overseas Employment

ASSISTANT ACCOUNTANT required for the Nigerian Government Railway for two tours, each of 12 to 24 months, with possibility of permanency. Salary £400-£25-£600-£30-£720 a year. Separation allowance for married men is £128 on £400. Free quarters and passage. Candidates, preferably unmarried, should have matriculated or have secured exemption therefrom, and have had suitable accounting experience or alternatively be Associate Members of one of the appropriate professional bodies. Preference will be given to those who have taken a degree in either Economics or Commerce at one of the recognised universities.

Applications in writing (no interviews), stating date of birth, full details of qualifications and experience, including present employment; also Identity and National Service or other registration particulars, and quoting reference No. O.5177S, should be addressed to the Ministry of Labour and National Service, Appointments Department, Sardinia Street, Kingsway, London, W.C.2.

OFFICIAL ADVERTISEMENTS

OFFICIAL ADVERTISEMENTS intended for insertion on this page should be sent in as early in the week as possible. The latest time for receiving official advertisements for this page for the current week's issue is 9.30 a.m. on the preceding Monday. The charge for these advertisements is 2d. per word with a minimum of 10 shillings for each insertion. All advertisements should be addressed to:—*The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

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extended to October 11, 1943, for the completion of the railways authorised by that Order.

G.W.R. Telephone Girls' Savings.—Miss Ellen Wilkinson, M.P., Joint Parliamentary Secretary, Ministry of Home Security, inspected recently at Paddington a "make-do-and-mend" exhibition, in aid of British Red Cross Funds, of work by G.W.R. telephone-inquiry girls, who have saved £2,170 in National Savings Certificates since war started.

R. & W. Hawthorn, Leslie & Co. Ltd.—Accounts for the year to June 30, 1943, show a net balance of £133,632 (£130,934) after providing for all charges, to which is added £53,148 brought forward. The final ordinary dividend is again 7 per cent., less tax, and the bonus of 5 per cent., less tax, is repeated, making, with the interim dividend of 3 per cent., a total distribution of 15 per cent., less tax, for the year (same). A transfer of £50,000 is again made to general reserve, and the amount to be carried forward is £56,168.

L.M.S.R. (Extension of Time) Order.—The Minister of War Transport has made the London Midland & Scottish Railway (Extension of Time) Order, 1943 (S.R. & O. 1943 No. 1494) extending by three years the time limited by:—(*a*) Section 27 of the L.M.S.R. Act, 1938, for the completion of Work No. 3 at Fleetwood authorised by Section 5 of the L.M.S.R. Act, 1931; (*b*) Section 4 of the L.M.S.R. Order Confirmation Act, 1937, as extended by the L.M.S.R. (Extension of Time) (No. 2) Order, 1941 for the completion of Railway No. 3 authorised by the Caledonian Railway (General Powers) Act, 1899; and (*c*) Sections 12 and 29 of the L.M.S.R. Act, 1937 as extended by the L.M.S.R. (Extension of Time) Order, 1941 for the compulsory purchase of certain lands authorised by Section 32 of the L.M.S.R. Act, 1931, Section 13 of the L.M.S.R. Act, 1934, and Section 8 of the L.M.S.R. Act, 1937.

Future of the Steel Industry.—In the course of his installation address as Master Cutler of Hallamshire, for the fourth year in succession, Mr. W. W. Wood, Director of the Wardsend Steel Co. Ltd., said that each section of the steel industry was controlled by someone lent to the Government by some firm engaged in that section, which gave the industry a measure of confidence. Would they remain in control, after the war, or, as seemed more likely, go back to their firms, leaving control in the hands of bureaucrats? Dealing with trade barriers and the lower standards of living in our competitor countries, Mr. Wood said that only by means of a clearing house for both goods and money, with rates of exchange based on the standards of living in the respective countries, should we avoid being swamped by cheap goods and be able to arrange with other nations to accept the ordered import of our own goods. Turning to the U.S.A., he said that America used to make 50 or 60 million, and had exported from one to two million, tons of steel a year. She was making now 100 million tons, and he asked whether she would be content with the same amount of export.

Barsi Light Railway Co. Ltd.—Sir Ernest A. S. Bell, the Chairman, presiding at the 49th ordinary general meeting, said that in the year to March 31 last, the gross income before deduction of any taxation, but after meeting debenture charges and preference dividend, was equivalent to just over 14¾ per cent. on the ordinary capital. The approximate gross earnings for the seven months to October 31 were Rs. 19,11,000, against Rs. 14,34,700 for last year, but these were abnormal figures, due to war conditions, and the bulk of any increase went in Excess Profits Tax.

Associated Equipment Co. Ltd.—At a meeting of the Board, held on November 15, it was decided to recommend a final dividend on the ordinary stock of twelve (12) pence per £1 unit of stock free of income tax, making 18 pence for the year ended September 30, 1943, which is equal to 15 per cent. for the year, subject to tax at 10s. in the £. It was also decided to recommend payment to the stockholders of a bonus at the rate of 5 per cent. free of tax. The net profit for the year (subject to final audit) was £227,500, compared with £141,500 for the previous year.

Bengal Dooars Railway Co. Ltd.—Pursuant to section 235 of the Companies Act, 1929, a general meeting of the members of this company (now in voluntary liquidation) will be held at 307, Winchester House, Old Broad Street, E.C.2, on Thursday, December 16, at 12.15 p.m., for the purpose of receiving from the liquidator an account of his acts and dealings and of the conduct of the windng up. The resolution that the company be wound up voluntarily was passed at an extraordinary general meeting on January 2, 1941. The acquisition and working of the railway by the State took effect on January 1, 1941, and it now forms part of the Bengal & Assam State Railway system.

Permanent Way Institution: Diamond Jubilee.—Next year will be the Diamond Jubilee Year of the Permanent Way Institution, and the Council of the Institution, at a meeting held in London on November 13, decided to set up a small committee to deal with the celebration of the event in as fitting a manner as wartime conditions will allow. Mr. S. L. Furnivall, Chief Engineer's Office, Southern Railway, is acting as Chairman, and Mr. F. Kerrigan, of the office of the Chief Engineer (Civil), London Transport, is the Secretary. The other members of the committee are as follow: Messrs. N. W. Swinnerton, Chief Engineer's Office, L.M.S.R.; C. W. King, Divisional Engineer, Southern Railway; B. P. Fletcher, District Engineer, L.N.E.R.; M. G. R. Smith, Assistant Divisional Engineer, G.W.R.; C. E. Dunton, Office of the Chief Engineer (Civil), London Transport; Charles E. Lee, Associate Editor, *The Railway Gazette*; H. Janes, Hon. Secretary, P.W.I.; and F. Lawson, Hon. Treasurer, P.W.I.

Blue Star Line and Air Powers.—Mr. Justice Bennett in the Chancery Division on November 15 had before him for confirmation an alteration of the objects—as defined in the memorandum of association—of Blue Star Line Limited in order to enable it to carry on the business of air transport. The terms of the special resolution for the alteration of the company's objects which was passed at an extraordinary general meeting on August 5 last would have enabled it to carry on a separate air business. His Lordship confirmed the proposed alteration of the company's objects, subject to the addition of words making it clear that the air transport business should be carried on in conjunction only with the existing shipping business.

Contracts and Tenders

The contracts below are at present in hand for the Sudan Government:—

North British Locomotive Co. Ltd.: Parts for the conversion of coal-fired locomotives to oil-fuel burning.

Beyer, Peacock & Co. Ltd.: Parts for the conversion of coal-fired locomotives to oil-fuel burning.

Cochran & Co. (Annan) Ltd.: Boilers.

Robert Stephenson & Hawthorns Limited: Locomotive boiler.

Hunslet Engine Co. Ltd.: Locomotive boiler.

Thomas Bolton & Sons Ltd.: Copper plates, etc.

Charles Clifford & Son Ltd.: Copper pipes and rods.

General Electric Co. Ltd.: Electrical fittings, etc.

Howell & Co. Ltd.: Boiler tubes.

Stewarts and Lloyds Limited: Boiler tubes.

Rivet, Bolt & Nut Co. Ltd.: Bolts and nuts.

Superheater Co. Ltd.: Superheater elements.

Norris, Henty & Gardners Limited: Diesel engines.

Crossley Bros. Ltd.: Diesel engines.

Bruntons (Sunbury 1919) Limited: Stern gear.

Gloucester Railway Carriage & Wagon Co. Ltd.: Buffers.

James Hill & Co. Ltd.: Ironmongery.

Vacuum Brake Co. Ltd.: Vacuum brake gear.

D. Wickham & Co. Ltd.: Trolleys and spares.

Taylor Bros. & Co. Ltd.: Tyres and axles.

Phosphor Bronze Co. Ltd.: Phosphor bronze.

Railway Stock Market

The general tendency in the stock and share markets has been undecided because of the small volume of business in evidence in most sections, and movements in values were moderate. Industrial shares retained their recent rally fairly well, and British Funds were relatively steady. In some quarters the market tendency was attributed to a disposition to await war news from the Russian and Italian fronts, but the prevailing belief was that sentiment continued to be dominated mainly by conflicting views and opinions as to the post-war outlook. Movements in home railway securities showed gains on balance despite inactive markets. A good impression was created by Sir William Wood's recent statement that over the past twenty years the railways provided no less than £440,000,000 for the maintenance and development of their undertakings. Had a less prudent policy been followed in this respect, stockholders could have received better dividends than the moderate payments that have been forthcoming. On the other hand, the railways have been maintained in an efficient condition, which has proved of vital importance to the nation during the war. This and similar factors will doubtless be borne fully in mind when there is a final decision as to post-war transport organisation problems. Whatever the method by which the latter may be carried out, there seems every reason to believe that home railway stocks are relatively undervalued at current levels, despite the recent tendency for yields on industrial and other classes of equity securities to increase. There has been continued talk of the possibility of fractionally better dividends for 1943 on L.M.S.R. ordinary and L.N.E.R. second preference. Yield considerations may not attract much buying until there is sustained improvement in the general trend of Stock Exchange markets. Not only are generous yields shown on ordinary stocks of the main-line companies, but the return on L.N.E.R. first and second preference, and also on L.M.S.R. 1923 preference and Southern preferred must be considered attractive. With the exception of L.N.E.R. second preference, all these stocks are in receipt of their full dividend rates, and this should continue in the post-war period. This would have to be borne in mind after the war, if there were then any decision to alter the capital structure of the railways. Yields on L.N.E.R. guaranteed stocks are also attractive; they are cumulative as to dividend, and this naturally adds to their investment merits.

Compared with a week ago, Great Western ordinary has improved from 61¾ to 62½ at the time of writing; the 5 per cent. preference rose further from 113½ to 115; and the 4 per cent. debentures were maintained at 112½; while the guaranteed stock was a point better at 126. L.M.S.R. ordinary was better on balance at 33, compared with 32; the 1923 preference has been maintained at 62¼ and the senior preference at 76¼. L.M.S.R. guaranteed remained at par, and the 4 per cent. debentures at 105½. L.N.E.R. first and second guaranteed were unchanged at 96 and 88 respectively, but the first preference eased to 61¼. On the other hand, although best prices were not held, this railway's second preference showed improvement on balance from 32⅞ to 33⅜. Southern deferred at 24½ recorded a gain of half-a-point on balance; the preferred at 78½ was the same as a week ago. Southern 4 per cent. debentures remained at 111, but the 5 per cent. preference was a point better at 114, and the guaranteed stock 126. London Transport "C" moved back from 67⅜ to 67.

Argentine railway stocks showed improvement after the news that the Argentine Government has appointed a committee to study the position of the British-owned railways in Argentina. Earlier gains, however, were not held. After touching 15, B.A. Gt. Southern ordinary eased to 14⅜; the 5 per cent. preference showed improvement on balance from 27⅜ to 29. Central Argentine 4½ per cent. preference was a point better at 21½, and B.A. Western 4½ per cents. improved to 28½, although, as in most other cases, best prices touched in the past few days were not held. Central Uruguay second debentures were among stocks which were better on balance. United of Havana debentures rallied to 35½ on talk of an interest payment next month. Leopoldina debentures were better at 57 and Antofagasta preference 46½. Canadian Pacifics were unchanged at 15.

Traffic Table and Stock Prices of Overseas and Foreign Railways

	Railways	Miles open	Week ending	Traffic for week: Total this year	Traffic for week: Inc. or dec. compared with 1941/2	No. of Weeks	Aggregate traffics to date: Totals 1942/3	Aggregate traffics to date: Totals 1941/2	Aggregate traffics to date: Increase or decrease	Shares or stock	Prices: Highest 1942	Prices: Lowest 1942	Prices: Nov. 19, 1943	Yield % (See Note)
				£	£		£	£	£					
South & Central America	Antofagasta (Chili & Bolivia	834	14.11.43	32,270	+ 13,010	46	1,302,400	978,450	+ 323,950	Ord. Stk.	14	7⅜	13¾	Nil
	Argentine North Eastern ...	753	13.11.43	16,146	+ 2,510	20	277,326	270,726	+ 6,600	,,	6½	3	7	Nil
	Bolivar	174	Oct., 1943	5,144	— 1,286	44	54,813	47,139	+ 5,674	6 p.c. Deb.	19¾	10	21½	Nil
	Brazil	—	—	—	—	—	—	—	—	Bonds	20¾	9	21	Nil
	Buenos Ayres & Pacific ...	2,807	13.11.43	104,400	+ 9,900	20	1,791,500	1,715,640	+ 76,260	Ord. Stk.	7⅞	4	6¾	Nil
	Buenos Ayres Great Southern	5,080	13.11.43	175,620	+ 23,040	20	2,951,340	2,692,020	+ 259,320	Ord. Stk.	12¼	7⅛	14¾	Nil
	Buenos Ayres Western ...	1,930	13.11.43	55,980	— 1,980	20	967,080	999,840	— 32,840	,,	12¾	6	12½	Nil
	Central Argentine	3,700	13.11.43	154,575	+ 28,167	20	2,636,019	2,429,919	+ 206,100	,,	9½	4 1/16	8¼	Nil
	Do.	—	—	—	—	—	—	—	—	Dfd.	3¾	2⅛	4	Nil
	Cent. Uruguay of M. Video	972	13.11.43	34,782	+ 10,035	20	614,493	428,283	+ 186,210	Ord. Stk.	8	4	6½	Nil
	Costa Rica	262	Sep., 1943	23,127	+ 11,571	13	72,024	38,244	+ 33,790	Stk.	16½	11	15	Nil
	Dorada	70	Oct., 1943	21,800	+ 2,330	43	2,810,407	157,175	+ 61,432	1 Mt. Db.	90½	89	96	6 5/16
	Entre Rios	806	13.11.43	19,380	— 128	20	393,180	365,640	+ 24,540	Ord. Stk.	33	4½	7	Nil
	Great Western of Brazil ...	1,030	13.11.43	21,600	+ 1,800	46	743,900	509,400	+ 234,500	Ord. Sh.	9/-	9/-	27/6	Nil
	International of Cl. Amer. ...	794	Sep.,1943	$486,725	+ $162,172	36	$5,512,281	$4,633,303	+ $878,978	—	—	—	—	—
	Interoceanic of Mexico ...	—	—	—	—	—	—	—	—	1st Pref.	1½	5/3	2	Nil
	La Guaira & Caracas... ...	22‡	Oct., 1943	6,900	— 1,670	44	83,360	71,925	+ 11,435	5 p.c. Deb.	11½	5	88½	Nil
	Leopoldina	1,918	13.11.43	42,368	+ 12,060	45	1,553,583	1,385,944	+ 208,639	Ord. Stk.	6¾	3¼	6¼	Nil
	Mexican	483	11.11.43	ps. 350,900	+ ps. 92,100	20	ps. 7,708,700	ps. 5,588,300	+ ps. 2,120,400	Ord. Stk.	1	⅛	1	Nil
	Midland Uruguay	319	Aug., 1943	14,706	+ 4,213	41	31,160	23,107	+ 8,053	—	—	—	—	—
	Nitrate	382	15.11.43	8,778	+ 728	46	137,471	172,058	— 34,587	Ord. Sh.	77/	3¼	72/6	Nil
	Paraguay Central	274	12.11.43	$4,895,000	+ $1,376,000	20	$103,781,000	$73,388,000	+ $30,393,000	Pr. Li. Stk.	53	40	70	8 7/16
	Peruvian Corporation ...	1,059	Oct., 1943	102,818	— 17,072	18	417,026	336,988	+ 80,038	Pref.	19¾	5¼	12	Nil
	Salvador	100	Sep., 1943	c 69,000	+ c 14,000	13	c 268,000	c 183,000	+ c85,000	—	—	—	—	—
	San Paulo	153‡	7.11.43	43,836	+ 11,614	45	1,963,558	1,664,130	+ 299,428	Ord. Stk.	59	41	58½	3 7/16
	Taltal	160	Oct., 1943	5,345	+ 2,165	17	22,250	19,840	+ 2,410	Ord. Sh.	41/-	23/-	27/6	Nil
	United of Havana	1,301	13.11.43	43,424	— 3,450	20	929,937	799,068	+ 130,869	Ord. Stk.	8¾	2¼	4¼	Nil
	Uruguay Northern	73	Aug., 1943	1,451	+ 395	9	2,838	2,198	+ 640	—	—	—	—	—
Canada	Canadian Pacific	17,034	14.11.43	1,224,200	+ 214,000	46	50,914,800	43,978,000	+ 6,936,800	Ord. Stk.	16¾	9 7/16	15	Nil
India†	Barsi Light	202	Aug., 1943	15,285	+ 2,003	22	107,055	76,587	+ 30,468	—	—	—	—	—
	Bengal-Nagpur	3,267	Sep., 1943	988,425	+ 121,050	25	6,141,675	5,300,475	+ 841,200	Ord. Stk.	102¼	88	103¼	3⅞
	Madras & Southern Mahratta	2,939	10.8.43	256,745	— 5,949	19	3,588,488	3,028,997	+ 559,491	,,	105¼	87	108¼	6 5/16
	South Indian	2,349	20.9.43	207,781	+ 66,283	24	3,491,129	3,028,490	+ 462,639	,,	103¾	88⅞	104½	4 7/16
Various	Egyptian Delta	—	10.10.43	16,936	+ 3,407	29	274,860	211,096	+ 63,764	Prf. Sh.	5¼	1¼	2¼	Nil
	Manila	—	—	—	—	—	—	—	—	B. Deb.	44	35	43½	13 13/16
	Midland of W. Australia ...	277	Sep., 1943	31,269	+ 3,556	13	101,693	84,321	+ 17,372	Inc. Deb.	95	90	100	6
	Nigerian	1,900	28.8.43	80,062	+ 29,036	21	1,398,693	1,212,844	+ 185,849	—	—	—	—	—
	South Africa	13,291	2.10.43	851,417	+ 61,474	27	22,232,795	20,514,452	+ 1,718,343	—	—	—	—	—
	Victoria	4,774	May, 1943	1,432,673	+ 67,979	—	—	—	—	—	—	—	—	—

Note. Yields are based on the approximate current prices and are within a fraction of ⅛

† Receipts are calculated @ 1s. 6d. to the rupee

Argentine traffics are given in sterling calculated @ 16⅔ pesos to the £

§ ex dividend